

Health Education: Results From the School Health Policies and Programs Study 2006

LAURA KANN, PhD^a

SUSAN K. TELLJOHANN, HSD, CHES^b

SUSAN F. WOOLEY, PhD, CHES^c

ABSTRACT

BACKGROUND: School health education can effectively help reduce the prevalence of health-risk behaviors among students and have a positive influence on students' academic performance. This article describes the characteristics of school health education policies and programs in the United States at the state, district, school, and classroom levels.

METHODS: The Centers for Disease Control and Prevention conducts the School Health Policies and Programs Study every 6 years. In 2006, computer-assisted telephone interviews or self-administered mail questionnaires were completed by state education agency personnel in all 50 states plus the District of Columbia and among a nationally representative sample of districts ($n = 459$). Computer-assisted personal interviews were conducted with personnel in a nationally representative sample of elementary, middle, and high schools ($n = 920$) and with a nationally representative sample of teachers of classes covering required health instruction in elementary schools and required health education courses in middle and high schools ($n = 912$).

RESULTS: Most states and districts had adopted a policy stating that schools will teach at least 1 of the 14 health topics, and nearly all schools required students to receive instruction on at least 1 of these topics. However, only 6.4% of elementary schools, 20.6% of middle schools, and 35.8% of high schools required instruction on all 14 topics. In support of schools, most states and districts offered staff development for those who teach health education, although the percentage of teachers of required health instruction receiving staff development was low.

CONCLUSIONS: Health education has the potential to help students maintain and improve their health, prevent disease, and reduce health-related risk behaviors. However, despite signs of progress, this potential is not being fully realized, particularly at the school level.

Keywords: school health education; schools; school policy; surveys.

Citation: Kann L, Telljohann SK, Wooley SF. Health education: Results from the School Health Policies and Programs Study 2006. *J Sch Health*. 2007; 77: 408-434.

^aDistinguished Fellow and Chief, Surveillance and Evaluation Research Branch, (lkk1@cdc.gov), Division of Adolescent and School Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 4770 Buford Highway, NE, MS-K33, Atlanta, GA 30341.

^bProfessor, (stelljo@utnet.utoledo.edu), Department of Health and Rehabilitative Services, University of Toledo, Mail Stop #119, 2801 W. Bancroft Street, Toledo, OH 43606.

^cExecutive Director, (swooley@ashaweb.org), American School Health Association, 7263 State Route 43, P.O. Box 708, Kent, OH 44240.

Address correspondence to: Laura Kann, Distinguished Fellow and Chief, Surveillance and Evaluation Research Branch (lkk1@cdc.gov), Division of Adolescent and School Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 4770 Buford Highway, NE, MS-K33, Atlanta, GA 30341.

School health education has been defined in various, though similar ways. For example, the Centers for Disease Control and Prevention (CDC) defines health education as: “A planned, sequential, K-12 curriculum that addresses the physical, mental, emotional, and social dimensions of health. The curriculum is designed to motivate and assist students to maintain and improve their health, prevent disease, and reduce health-related risk behaviors. It allows students to develop and demonstrate increasingly sophisticated health-related knowledge, attitudes, skills, and practices. The comprehensive health education curriculum includes a variety of topics such as personal health, family health, community health, consumer health, environmental health, sexuality education, mental and emotional health, injury prevention and safety, nutrition, prevention and control of disease, and substance use and abuse. Qualified, trained teachers provide health education.”^{1,2}

In 2002, the 2000 Joint Committee on Health Education Terminology defined health education as “the development, delivery, and evaluation of planned, sequential, and developmentally appropriate instruction, learning experiences, and other activities designed to protect, promote, and enhance the health literacy, attitudes, skills, and well-being of students, pre-kindergarten through grade 12.”³

Regardless of the exact definition, reviews of effective programs and curricula and input from experts in the field of health education have identified the following characteristics of effective health education:⁴⁻¹⁴

- focuses on specific behavioral outcomes
- is research based and theory driven
- addresses individual values and group norms that support health-enhancing behaviors
- focuses on increasing the personal perception of risk and harmfulness of engaging in specific health-risk behaviors, as well as reinforcing protective factors
- addresses social pressures and influences
- builds personal competence, social competence, and self-efficacy by addressing skills
- provides functional health knowledge that is basic, accurate, and directly contributes to health-promoting decisions and behaviors
- uses strategies designed to personalize information and engage students
- provides age-appropriate and developmentally appropriate information, learning strategies, teaching methods, and materials
- incorporates learning strategies, teaching methods, and materials that are culturally inclusive
- provides adequate time for instruction and learning
- provides opportunities to reinforce skills and positive health behaviors

- provides opportunities to make positive connections with influential persons
- includes teacher information and plans for professional development and training that enhances effectiveness of instruction and student learning.

The *National Health Education Standards* provide a framework for designing or selecting health education curricula and allocating instructional resources, as well as providing a basis for the assessment of student achievement. The *National Health Education Standards* also offer students, families, and communities concrete expectations for health education. The Joint Committee on National Health Education Standards released the first set of standards in 1995.¹⁵ The National Health Education Standards Review and Revision Panel released the following updated set of 8 standards in 2007:¹⁶

1. Students will comprehend concepts related to health promotion and disease prevention to enhance health.
2. Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
3. Students will demonstrate the ability to access valid information and products and services to enhance health.
4. Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
5. Students will demonstrate the ability to use decision-making skills to enhance health.
6. Students will demonstrate the ability to use goal-setting skills to enhance health.
7. Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
8. Students will demonstrate the ability to advocate for personal, family, and community health.

Research has shown that school health education can effectively help reduce the prevalence of health-risk behaviors among students and have a positive influence on students' academic performance. For example, a tobacco-use prevention program reduced by about 26% the number of students who started smoking during grades 7-9;¹⁷ a comprehensive intervention that included health education in public elementary schools that serve high-crime areas in Seattle, Washington, was associated with increased student commitment to school, reduced misbehavior in school, and improved academic achievement, plus fewer risk-taking behaviors such as violence and heavy drinking;¹⁸ and the Coordinated Approach to Child Health curriculum slowed increases in the number of Hispanic students who were overweight or at risk of becoming overweight when it was

implemented in elementary schools in a low-income community in El Paso, Texas.¹⁹

SELECTED FEDERAL SUPPORT AND RELATED RESEARCH

Support for school health education comes from many sources. Through February 2008, the CDC's Division of Adolescent and School Health will be supporting education agencies and health agencies to help build and strengthen their capacity for improving child and adolescent health within the following 6 priority areas, all of which include school health education activities:

- Human immunodeficiency virus (HIV) prevention—CDC funds education agencies in 48 states, the District of Columbia, 7 territories, and 17 large urban school districts to help schools prevent sexual risk behaviors that result in HIV infection, especially among youth who are at highest risk.
- Coordinated school health programs—CDC funds 23 state education agencies, and through them their state health agencies, to build state education agency and state health agency partnerships and their capacity to implement and coordinate school health programs across agencies and within schools and to help schools reduce chronic disease risk factors, including tobacco use, poor nutrition, and physical inactivity.
- Abstinence—CDC funds 11 state education agencies to help schools increase the efficiency and impact of their efforts to help young people abstain from sexual risk behaviors.
- Asthma—CDC funds 1 state and 7 local education agencies to implement demonstration programs that help schools reduce asthma episodes and asthma-related absences.
- Professional development—CDC funds 2 state education agencies to help schools reduce health problems among youth by planning and delivering professional development opportunities that build the capacity of other funded agencies to support the expansion, improvement, and sustainability of their school health programs.
- Food safety—CDC provides funding for 1 state education agency to implement a demonstration program that helps schools reduce food-borne illnesses.

The CDC also funds 30 national nongovernmental organizations to provide capacity building services to these funded agencies. In addition, many programs at the CDC have developed instructional materials that can be used by teachers for school health education²⁰ and some support state programs that include school health education activities.

Several other federal agencies also support school health education throughout the nation. The US

Department of Education, through the Office of Safe and Drug Free Schools, funds drug and violence prevention and activities that promote the health and well being of students in elementary and secondary schools.²¹ State and local education agencies carry out most activities, many of which focus on school health education. The US Departments of Education, Health and Human Services, and Justice fund the Safe Schools/Healthy Students program to prevent violence and substance abuse among youth and within schools and communities.²² The US Department of Health and Human Services also supports abstinence education with 3 programs, all of which include school health education activities: the Adolescent Family Life Abstinence Education Demonstration Projects,²³ Section 510 State Abstinence Education Program,²⁴ and the Community-Based Abstinence Education Program.²⁵

Healthy People 2010 Objective 7-2a to “increase the proportion of middle, junior high, and senior high schools that provide school health education to prevent health problems in the following areas: unintentional injury; violence; suicide; tobacco use and addiction; alcohol and other drug use; unintended pregnancy, HIV/AIDS, and STD infection; unhealthy dietary patterns; inadequate physical activity; and environmental health” articulates further federal-level support for health education.²⁶

State and local agencies and many nongovernmental organizations also support school health education. Universities and other research organizations conduct studies to document the effectiveness of school health education and its impact on students' health and educational outcomes. This research provides a framework for advocating for further federal, state, and local support for school health education and is often the key to helping decision makers understand the value of making room in the overcrowded and testing-focused curriculum for school health education. Most of these studies focus on only 1 or 2 content areas, but taken together, they provide evidence of the impact that school health education can have and its critical role, along with the other components of the school health program, in helping students improve health, prevent disease, and reduce risks.

The School Health Policies and Programs Study (SHPPS) was conducted previously in 1994²⁷ and again in 2000.²⁸ The 1994 study focused only on middle schools and high schools. The 2000 study assessed health education in elementary schools, middle schools, and high schools. Both studies provided a comprehensive assessment of health education at the state, district, school, and classroom levels, but they are now out of date. Other studies since 2000 have examined various aspects of school health education nationwide. For example, the

National Association of State Boards of Education's Center for Safe and Healthy Schools maintains an extensive database of state school health policies on 38 major school health topics in 6 major categories including curriculum and instruction,²⁹ and the Guttmacher Institute monitors state-level policies on sex education and sexually transmitted diseases (STD)/HIV education.³⁰ However, no other studies since SHPPS 2000 are national in scope, cover most aspects of health education, and address the state, district, school, and classroom levels.

This article describes for the first time findings from SHPPS 2006 about state- and district-level health education standards and guidelines; elementary school, middle school, and high school instruction; professional preparation; staffing and staff development; collaboration; evaluation; and health education coordinators. At the school level, this article describes health education requirements; elementary school, middle school, and high school instruction; staffing and professional development; and collaboration. At the classroom level, this article describes elementary school, middle school, and high school instruction; teaching methods; and staffing and staff development. In addition, the article describes changes in key health education policies and programs from 2000 to 2006. While this article is primarily descriptive in nature, the CDC intends to conduct more detailed analyses and encourages others to conduct their own analyses using the questionnaires and public-use data sets available at www.cdc.gov/shpps.

METHODS

Detailed information about SHPPS 2006 methods is provided in "Methods: School Health Policies and Programs Study 2006" elsewhere in this issue of the *Journal of School Health*. The following section provides a brief overview of SHPPS 2006 methods specific to the health education component of the study.

SHPPS 2006 assessed health education at the state, district, school, and classroom levels. State-level data were collected from education agencies in all 50 states plus the District of Columbia. District-level data were collected from a nationally representative sample of public school districts. School-level data were collected from a nationally representative sample of public and private elementary schools, middle schools, and high schools. Classroom-level data were collected from teachers of randomly selected classes covering required health instruction in elementary schools and randomly selected required health education courses in middle schools and high schools.

Questionnaires

The state- and district-level questionnaires assessed school health education policies for grades K-12. Both questionnaires assessed use of school health education standards and guidelines; required health education instruction at the elementary school, middle school, and high school levels; staffing and staff development; collaboration between health education staff and other agency and organization staff; and the educational background and credentials of the person who oversees or coordinates school health education for the state or district. The state-level questionnaire also collected data on student assessment practices and the district-level questionnaire also collected data on evaluation of health education and how health education is promoted among families, school personnel, and the media.

Because the entire district-level questionnaire took longer than 20-30 minutes to complete and covered such a wide range of topics that a single respondent might not have sufficient knowledge to complete it, the questionnaire was divided into 5 modules: (1) standards and guidelines, (2) elementary school instruction, (3) middle/junior high school instruction, (4) senior high school instruction, and (5) staffing and staff development, collaboration, promotion, evaluation, and health education coordinator.

The school-level health education questionnaire assessed health education practices in elementary schools, middle schools, and high schools. Specifically, the questionnaire assessed use of school health education standards, guidelines, and objectives; required health instruction; staffing and staff development; collaboration between health education teachers and other school and community personnel; promotion of health education among families and students; and the educational background and credentials of the person who oversees or coordinates health education at the school.

The classroom-level health education questionnaire assessed general characteristics of health education classes or courses; specific content taught; teaching methods; and the educational background, credentials, and recent staff development of health education teachers.

Data Collection and Respondents

State- and district-level data were collected by computer-assisted telephone interviews or self-administered mail questionnaires. Designated respondents for each of 7 school health program components (ie, health education, physical education and activity, health services, mental health and social services, nutrition services, healthy and safe school environment, and faculty and staff health

promotion) completed the interviews or questionnaires. At the state level, the state-level contact designated a single respondent for each questionnaire. At the district level, the district-level contact could designate a different respondent for each questionnaire or questionnaire module. All designated respondents had primary responsibility for, or were the most knowledgeable about, the policies and programs addressed in the particular questionnaire or module.

After a state- or district-level contact identified respondents, each respondent was sent a letter of invitation and packet of study-related materials. Each packet contained a paper copy of the questionnaire(s) so that respondents could prepare for the interview and provided a toll-free number and access code that respondents could use to initiate the interview. Respondents were told that the questionnaire(s) could be used in preparation for their telephone interview or completed and returned if self-administration was preferred. One week after packets were mailed to respondents, trained interviewers from a call center placed calls to them to schedule and conduct telephone interviews. In April 2006, telephone interviewing ceased and most of the remaining state- and district-level data collection occurred via a mail survey. All remaining respondents were mailed paper questionnaires and return envelopes; however, interviewers remained available for any respondents who chose to contact the call center.

At the end of the data collection period (October 2006), 88% of the completed state-level health education questionnaires had been completed via telephone interviews and 12% as paper questionnaires. For the completed district-level questionnaires, module 1 was completed via telephone interview 51% of the time; module 2, 54%; module 3, 50%; module 4, 51%; and module 5, 52%.

School-level and classroom-level data were collected by computer-assisted personal interviews. During recruitment, the principal or another school-level contact designated a faculty or staff respondent for each questionnaire or module, who had primary responsibility for or the most knowledge about the particular component. The principal or school-level contact could designate a different respondent for each questionnaire or module. For the school-level health education interview, the most common respondents were health education teachers, physical education teachers, or other teachers.

At the classroom level, respondents to the computer-assisted personal interviews were those health education teachers whose elementary school class or middle school or high school course was selected during the sampling process. All school-level and classroom-level interviews were completed between January and June 2006.

Response Rates

One hundred percent ($n = 51$) of the state education agencies completed the state-level health education questionnaire. District eligibility for each module was determined prior to beginning the interview; 720 districts were eligible for each of modules 1 and 5, 697 districts were eligible for module 2, 695 for module 3, and 663 for module 4. Of the 720 districts eligible to complete any health education questionnaire module, 64% ($n = 459$) completed at least 1 module. At the school level, 1338 schools were eligible for the health education interview; 69% ($n = 920$) of these schools completed the interview. At the classroom level, 967 classes or courses were selected for the health education interview; teachers of 94% ($n = 912$) of these classes or courses completed the interview.

Data Analysis

Data from state-level questionnaires are based on a census and are not weighted. District-, school-, and classroom-level data are based on representative samples and are weighted to produce national estimates. Two weights were constructed for analysis of classroom data. The first weight is appropriate for making inferences to schools nationwide based on the aggregation of classroom data within each school. The second weight is appropriate for making inferences to required elementary school classes or required middle school and high school courses nationwide based on the data about the individual classes or courses.

Because of missing data, the denominators for each estimate vary slightly. Figures 1-3 in Appendix 1 of this issue of the *Journal of School Health* show the estimated standard error associated with an observed estimate from the district-, school-, and classroom-level health education questionnaires.

To analyze changes between SHPPS 2000 and SHPPS 2006, many variables from SHPPS 2000 were recalculated so that the denominators used for both years of data were defined identically. In most cases, this denominator included all states, districts, or schools rather than a subset of states, districts, or schools. As a result of this recalculation, percentages previously reported for SHPPS 2000²⁸ might differ from those reported in this article. Only estimates from 2000 and 2006 based on this same denominator should be compared.

Because state-level data are based on a census, statistical tests for differences between 2000 and 2006 are not appropriate. Therefore, this article highlights changes over time meeting at least 1 of 2 criteria: (1) the difference was greater than 10 percentage points or 2) the 2006 estimate increased by at least a factor of 2 or decreased by at least half as

compared with the 2000 estimate. At the district, school, and classroom levels, *t* tests were used to compare SHPPS 2000 and SHPPS 2006 prevalence estimates. However, to account for multiple comparisons, this article only highlights changes over time meeting at least 2 of 3 criteria: (1) a *p* value less than .01 from the *t* test, (2) a difference greater than 10 percentage points, or (3) the 2006 estimate increased by at least a factor of 2 or decreased by at least half as compared with the 2000 estimate. A *p* value less than .01 was used as the sole criterion for reporting on statistically significant differences based on means and medians between 2000 and 2006. Note that not all variables meeting these criteria are presented in this article.

RESULTS

Health Education at the State and District Levels

Standards and Guidelines. Most (74.5%) states had adopted a policy stating that districts or schools will follow national or state health education standards or guidelines. An additional 7.8% of states had adopted a policy encouraging districts or schools to follow national or state health education standards or guidelines. Among all states, 72.0% required or encouraged districts or schools to follow health education standards or guidelines based specifically on the *National Health Education Standards*.¹⁶ To improve district or school compliance with any national or state health education standards or guidelines, 87.8% of the 42 states that required or encouraged following national or state standards or guidelines used staff development for health education teachers, 56.4% included health education when the state did onsite reviews in school districts for overall compliance with educational standards or guidelines, 34.2% used written reports from districts or schools to document compliance, and 14.3% included health education in statewide assessments or testing.

Most (79.3%) districts also had adopted a policy stating that schools will follow national, state, or district health education standards or guidelines. An additional 5.6% of districts had adopted a policy encouraging schools to follow national, state, or district health education standards or guidelines. Among all districts, 66.0% required or encouraged schools to follow health education standards or guidelines based specifically on the *National Health Education Standards*.¹⁶ To improve school compliance with any national, state, or district health education standards or guidelines, 87.5% of the 84.9% of districts that required or encouraged schools to follow national, state, or district standards or guidelines used teacher evaluations or classroom monitoring, 78.1% used staff development for health education teachers, 74.2% used teachers to mentor other

teachers, and 53.9% used written reports from schools to document compliance with health education standards or guidelines.

Elementary School Instruction. Nationwide, 70.6% of states had adopted goals, objectives, or expected outcomes for elementary school health education. Similarly, among districts nationwide that provide elementary school instruction, 70.2% had adopted goals, objectives, or expected outcomes for elementary school health education. Almost two thirds or more of states and more than half of districts had adopted goals and objectives for elementary school health education that addressed the knowledge and skills articulated in the *National Health Education Standards*,¹⁶ such as accessing valid health information and health-promoting products and services; advocating for personal, family, and community health; analyzing the influence of culture, media, technology, and other factors on health; comprehending concepts related to health promotion and disease prevention; practicing health-enhancing behaviors and reducing health risks; using goal-setting and decision-making skills to enhance health; and using interpersonal communication skills to enhance health (Table 1).

Nationwide, 88.2% of states had adopted a policy stating that elementary schools will teach at least 1 of the 14 health topics (chosen to reflect the leading causes of mortality and morbidity among both youth and adults and other important public health issues) and 62.8% had adopted a policy stating that elementary schools will teach at least 7 of the 14. Only 5.9% of states had adopted a policy stating that elementary schools will teach all 14. More than half of all states had adopted a policy stating that elementary schools will teach about alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, injury prevention and safety, nutrition and dietary behavior, physical activity and fitness (ie, classroom instruction not a physical education period), tobacco-use prevention, and violence prevention (Table 2). Less than half of all states had adopted a policy stating that elementary schools will teach about asthma awareness, food-borne illness prevention, human sexuality, other STD prevention, pregnancy prevention, and suicide prevention. Only 19.6% of states had specified time requirements for at least 1 health topic or any health instruction at the elementary school level. Similarly, only 19.6% of states had adopted a policy stating that elementary school students will be tested on health topics.

Among all districts nationwide that provided elementary school instruction, 91.2% had adopted a policy stating that elementary schools will teach at least 1 of the 14 health topics and 64.2% had adopted a policy stating that elementary schools will teach at least 7 of the 14. Only 9.4% of districts had

Table 1. Percentage of All States, Districts, and Schools That Had Health Education Goals or Objectives Addressing Student Outcomes From the Knowledge and Skills Articulated in the *National Health Education Standards*, by School Level, SHPPS 2006

Student Outcome	% of All States			% of All Districts			% of All Schools		
	Elementary Schools	Middle Schools	High Schools	Elementary Schools	Middle Schools	High Schools	Elementary Schools	Middle Schools	High Schools
Accessing valid health information and health-promoting products and services	66.7	70.6	72.5	54.7	68.7	77.8	67.7	68.4	80.3
Advocating for personal, family, and community health	64.7	66.7	70.6	62.4	75.8	80.8	74.3	73.1	82.1
Analyzing the influence of culture, media, technology, and other factors on health	64.7	70.6	74.5	54.9	71.3	76.6	63.3	73.6	80.7
Comprehending concepts related to health promotion and disease prevention	70.6	72.5	76.5	65.8	78.5	82.1	78.6	78.2	83.6
Practicing health-enhancing behaviors and reducing health risks	70.6	72.5	76.5	69.2	78.6	81.5	80.4	79.2	84.8
Using goal-setting and decision-making skills to enhance health	68.6	70.6	74.5	66.4	76.6	81.8	76.6	77.8	84.1
Using interpersonal communication skills to enhance health	68.6	70.6	74.5	62.9	71.5	80.4	76.2	74.8	81.7

adopted a policy stating that elementary schools will teach all 14. More than half of all districts had adopted a policy stating that elementary schools will teach alcohol-use or other drug-use prevention, emotional and mental health, injury prevention and safety, nutrition and dietary behavior, physical activity and fitness, tobacco-use prevention, and violence prevention (Table 2). Less than half of districts had adopted a policy stating that elementary schools will teach about asthma awareness, food-borne illness prevention, or suicide prevention. Similarly, less than half of all districts had adopted a policy stating that elementary schools will teach about HIV prevention, human sexuality, other STD prevention, and pregnancy prevention. Among the 60.8% of districts that required that at least 1 of these 4 topics be taught, 85.4% had adopted a policy stating that ele-

mentary schools will notify parents or guardians before students receive the instruction and 92.0% had adopted a policy stating that elementary schools will allow parents or guardians to exclude their children from receiving the instruction. Only 36.9% of districts had specified time requirements for at least 1 health topic or any health instruction at the elementary school level.

Only 5.9% of states required and 15.7% recommended that districts or schools use 1 particular curriculum (defined as a written course of study that generally describes what students will know and be able to do by the end of a single grade or multiple grades and for a particular subject area; often presented through a detailed set of directions, strategies, and materials to facilitate student learning and teaching of content) for elementary school health

Table 2. Percentage of All States, Districts, and Schools That Required the Teaching of Health Topics, by School Level, SHPPS 2006

Health Topic	% of All States			% of All Districts			% of All Schools		
	Elementary Schools	Middle Schools	High Schools	Elementary Schools	Middle Schools	High Schools	Elementary Schools	Middle Schools	High Schools
Alcohol-use or other drug-use prevention	76.5	76.5	82.0	79.0	89.7	89.3	76.5	84.6	91.8
Asthma awareness	32.0	35.3	31.4	45.9	49.9	50.4	44.9	47.0	53.8
Emotional and mental health	66.0	68.0	65.3	58.4	78.1	85.5	66.9	78.0	83.5
Food-borne illness prevention	32.0	38.0	40.0	45.2	58.3	68.7	48.5	60.0	71.6
HIV prevention	60.8	74.5	74.5	48.6	79.0	89.3	39.1	74.5	88.4
Human sexuality	49.0	58.8	60.8	43.4	70.8	80.4	48.4	71.9	84.0
Injury prevention and safety	70.0	71.4	66.0	77.4	80.3	84.2	83.3	79.1	80.8
Nutrition and dietary behavior	72.0	67.3	72.0	77.4	85.1	87.9	84.6	82.3	86.3
Other STD prevention	45.1	68.6	66.7	32.8	77.3	87.3	21.7	69.6	88.2
Physical activity and fitness	60.8	56.0	62.0	61.1	72.0	83.3	79.4	76.7	82.3
Pregnancy prevention	27.5	58.8	58.0	27.2	70.0	85.9	16.4	61.3	81.6
Suicide prevention	44.0	52.0	55.1	33.6	62.3	77.4	25.5	54.4	76.5
Tobacco-use prevention	72.5	70.6	74.0	81.1	87.7	89.8	75.8	84.0	91.0
Violence prevention	61.2	65.3	65.3	83.6	83.8	85.0	86.4	76.9	77.3

HIV, human immunodeficiency virus; STD, sexually transmitted disease.

education. Curriculum requirements were more common at the district level than at the state level. Among all districts that provided elementary school instruction, 31.2% required and 27.3% recommended that schools use 1 particular curriculum for elementary school health education. The state education agency contributed to the development of this curriculum in 33.3% of the districts that had a requirement or recommendation. The district itself contributed to the development of this curriculum in 24.8% of the districts, a commercial company did so in 10.6% of the districts, and other state agencies, academic institutions, or state-level organizations or coalitions each contributed to the development of this curriculum in fewer than 5% of districts.

During the 2 years preceding the study, states and districts provided a variety of materials for elementary school health education (Table 3). Generally, states were most likely to provide plans for how to assess or evaluate students in health education, and districts were most likely to provide health education curricula and lesson plans or learning activities.

Middle School Instruction. Nationwide, 76.5% of states had adopted goals, objectives, or expected outcomes for middle school health education. Similarly, among districts nationwide that provided middle school instruction, 80.9% had adopted goals, objectives, or expected outcomes for middle school health education. At least two thirds of states and districts had adopted goals and objectives for middle school health education that addressed the knowledge and skills articulated in the *National Health Education Standards*¹⁶ (Table 1).

Nationwide, 86.3% of states had adopted a policy stating that middle schools will teach at least 1 of the 14 health topics and 62.8% had adopted a policy stating those schools will teach at least 7 of the 14. Only 21.6% of states had adopted a policy stating that middle schools will teach all 14. More than half of all states had adopted a policy stating that middle

schools will teach about alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, human sexuality, injury prevention and safety, nutrition and dietary behavior, other STD prevention, physical activity and fitness, pregnancy prevention, suicide prevention, tobacco-use prevention, and violence prevention (Table 2). Less than half of all states had adopted a policy stating that middle schools will teach about asthma awareness and food-borne illness prevention. Only 31.4% of states had specified time requirements for at least 1 health topic or any health instruction at the middle school level. Nationwide, 21.6% of states had adopted a policy stating that middle school students will be tested on health topics.

Among all districts nationwide that provided middle school instruction, 94.3% had adopted a policy stating that those schools will teach at least 1 of the 14 health topics and 82.3% had adopted a policy stating that they will teach at least 7 of the 14. Only 27.2% of districts had adopted a policy stating that middle schools will teach all 14. More than two thirds of all districts had adopted a policy stating that middle schools will teach about alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, human sexuality, injury prevention and safety, nutrition and dietary behavior, other STD prevention, physical activity and fitness, pregnancy prevention, tobacco-use prevention, and violence prevention (Table 2). Less than two thirds of all districts had adopted a policy stating that middle schools will teach about asthma awareness, food-borne illness prevention, and suicide prevention. Among the 85.5% of districts that required middle schools to teach HIV prevention, human sexuality, other STD prevention, or pregnancy prevention, 72.7% had adopted a policy stating that those schools will notify parents or guardians before students receive the instruction, and 85.7% had adopted a policy stating that middle schools will allow parents or guardians to exclude

Table 3. Percentage of All States, Districts, and Schools That Provided Health Education Materials, by School Level, SHPPS 2006

Health Education Material	% of All States			% of All Districts			% of All Schools		
	Elementary Schools	Middle Schools	High Schools	Elementary Schools	Middle Schools	High Schools	Elementary Schools	Middle Schools	High Schools
Chart describing the scope and sequence of instruction for health education	51.0	49.0	43.1	43.9	54.4	53.4	58.9	53.0	59.0
Goals, objectives, and expected health outcomes	NA	NA	NA	NA	NA	NA	81.9	79.9	85.2
Health education curriculum	37.3	37.3	33.3	57.5	62.3	64.5	77.4	72.5	78.9
Lesson plans or learning activities for health education	49.0	54.9	54.9	56.1	55.5	48.9	57.5	45.7	55.3
List of recommended health education curricula	39.2	41.2	43.1	47.0	53.3	54.0	NA	NA	NA
List of recommended health education textbooks	39.2	43.1	43.1	33.7	49.9	58.1	NA	NA	NA
Plans for how to assess or evaluate students in health education	60.0	64.7	58.8	39.8	47.6	47.8	55.2	46.6	55.1

NA, not asked at this level.

their children from receiving the instruction. Two thirds (66.8%) of districts had specified time requirements for at least 1 health topic or any health instruction at the middle school level.

Only 7.8% of states required and 9.8% recommended that districts or schools use 1 particular curriculum for middle school health education. Curriculum requirements were more common at the district level than at the state level. Among all districts that provided middle school instruction, 36.8% required and 25.8% recommended that schools use 1 particular curriculum for middle school health education. The state education agency contributed to the development of this curriculum in 32.0% of the districts that had a requirement or recommendation. The district itself contributed to the development of this curriculum in 34.3% of the districts, a commercial company did so in 12.7% of the districts, and other state agencies, academic institutions, or state-level organizations or coalitions each contributed to the development of this curriculum in less than 6% of districts.

During the 2 years preceding the study, states and districts provided a variety of materials for middle school health education (Table 3). Generally, states were most likely to provide plans for how to assess or evaluate students in health education, and districts were most likely to provide health education curricula, lesson plans or learning activities for health education, a chart describing the scope and sequence of instruction for health education, and a list of recommended health education curricula.

High School Instruction. Nationwide, 78.4% of states had adopted goals, objectives, or expected outcomes for high school health education. Similarly, among districts nationwide that provide high school instruction, 82.9% had adopted goals, objectives, or expected outcomes for high school health education. More than two thirds of states and more than three fourths of districts had adopted goals and objectives for high school health education that addressed the knowledge and skills articulated in the *National Health Education Standards*¹⁶ (Table 1).

Nationwide, 90.2% of states had adopted a policy stating that high schools will teach at least 1 of the 14 health topics and 60.8% had adopted a policy stating that they will teach at least 7 of the 14. Only 21.6% of states had adopted a policy stating that high schools will teach all 14. More than half of all states had adopted a policy stating that high schools will teach about alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, human sexuality, injury prevention and safety, nutrition and dietary behavior, other STD prevention, physical activity and fitness, pregnancy prevention, suicide prevention, tobacco-use prevention, and violence prevention (Table 2). Less than half of all states had adopted a policy stating that high

schools will teach about asthma awareness and food-borne illness prevention. Nearly, two thirds (60.8%) of states had specified time requirements for at least 1 health topic or any health instruction at the high school level. Nationwide, 21.6% of states had adopted a policy stating that high school students will be tested on health topics.

Among all districts nationwide that provided high school instruction, 95.1% had adopted a policy stating that high schools will teach at least 1 of the 14 health topics and 87.4% had adopted a policy stating that they will teach at least 7 of the 14. About one third (35.5%) of districts had adopted a policy stating that high schools will teach all 14. More than three fourths of all districts had adopted a policy stating that high schools will teach about alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, human sexuality, injury prevention and safety, nutrition and dietary behavior, other STD prevention, physical activity and fitness, pregnancy prevention, suicide prevention, tobacco-use prevention, and violence prevention (Table 2). Less than three fourths of all districts had adopted a policy stating that high schools will teach about asthma awareness and food-borne illness prevention. Among the 90.5% of districts that required high schools to teach HIV prevention, human sexuality, other STD prevention, or pregnancy prevention, 59.9% had adopted a policy stating that those schools will notify parents or guardians before students receive the instruction, and 76.3% had adopted a policy stating that high schools will allow parents or guardians to exclude their children from receiving the instruction. Most (81.9%) districts had specified time requirements for at least 1 health topic or any health instruction at the high school level.

Only 7.8% of states required and 11.8% recommended that districts or schools use 1 particular curriculum for high school health education. Curriculum requirements were more common at the district than at the state level. Among all districts that provided high school instruction, 37.5% required and 25.1% recommended that schools use 1 particular curriculum for high school health education. The state education agency contributed to the development of this curriculum in 34.8% of the districts that had a requirement or recommendation. The district itself contributed to the development of this curriculum in 34.8% of the districts, a commercial company did so in 9.7%, and other state agencies, academic institutions, or state-level organizations or coalitions each contributed to the development of this curriculum in 5% or fewer districts.

During the 2 years preceding the study, states and districts provided a variety of materials for high

school health education (Table 3). Generally, states were most likely to provide plans for how to assess or evaluate students in health education and lesson plans or learning activities for health education, and districts were most likely to provide health education curricula and a list of recommended health education textbooks.

Professional Preparation. Nationwide, 34.0% of all states and 33.7% of all districts had adopted a policy stating that newly hired staff who teach health education at the elementary school level will have undergraduate or graduate training in health education, 72.0% of states and 59.0% of districts had adopted this policy for newly hired staff who teach health education at the middle school level and 82.0% of states and 78.1% of districts had adopted this policy for newly hired staff who teach health education at the high school level.

Nationwide, 94.1% of all states offered some type of certification, licensure, or endorsement to teach health education. Specifically, 62.7% of states offered certification, licensure, or endorsement to teach health education for grades K-12; 19.6% offered it for elementary school; 54.9% offered it for middle school; and 58.8% offered it for high school. In addition, 44.0% of states offered a combined health education and physical education certification, licensure, or endorsement for grades K-12; 24.0% offered it for elementary school; 30.0% offered it for middle school; and 32.0% offered it for high school.

Only 21.3% of all states and 41.7% of all districts had adopted a policy stating that newly hired staff who teach health education at the elementary school level will be certified, licensed, or endorsed by the state to teach health education. In contrast, 72.3% of states and 69.7% of districts had adopted this policy for newly hired staff at the middle school level and 78.7% of states and 82.8% of districts had adopted it for newly hired staff at the high school level.

In addition, 15.7% of all states and 35.0% of all districts had adopted a policy stating that newly hired staff who teach health education at the middle school level will be Certified Health Education Specialists (CHES), and 17.6% of states and 40.6% of districts had adopted it for newly hired staff who teach health education at the high school level.

Staffing and Staff Development. Nationwide, 22.0% of states had adopted a policy stating that each school district will have someone oversee or coordinate school health education and 13.7% of states had adopted a policy stating that each school will have someone perform this function at the school (eg, a lead health education teacher). Among all districts, 42.6% had adopted a policy stating that each school will have someone oversee or coordinate health education at the school.

Nationwide, 61.7% of states had adopted a policy stating that teachers will earn continuing education credits on health topics to maintain state certification, licensure, or endorsement to teach health education. Among all districts, 39.2% had a policy stating that those who taught health education will earn continuing education credits on health education topics.

Staff development was defined as workshops, conferences, continuing education, graduate courses, or any other kind of in-service on health topics or teaching methods. During the 2 years preceding the study, 94.1% of all states provided funding for staff development or offered staff development for those who taught health education on at least 1 of the 14 health topics. Specifically, more than three fourths of all states provided funding for staff development or offered staff development for those who taught health education on alcohol-use or other drug-use prevention, HIV prevention, injury prevention and safety, nutrition and dietary behavior, other STD prevention, physical activity and fitness, tobacco-use prevention, and violence prevention (Table 4). Less than three fourths of all states provided funding for staff development or offered staff development for those who taught health education on asthma awareness, emotional and mental health, food-borne illness prevention, human sexuality, pregnancy prevention, and suicide prevention. In addition, more than three fourths of all states provided funding for staff development or offered staff development on encouraging family or community involvement, teaching skills for behavior change, using classroom management techniques (eg, social skills training, environmental modification, conflict resolution and mediation, and behavior management), and using interactive teaching methods (eg, role plays or cooperative group activities). Less than three fourths of all states provided funding for staff development or offered staff development on assessing or evaluating students in health education; teaching students of various cultural backgrounds; teaching students with limited English proficiency; and teaching students with long-term physical, medical, or cognitive disabilities.

Districts also provided funding for staff development or offered staff development on health topics and teaching methods (Table 4). During the 2 years preceding the study, 94.7% of all districts provided funding for staff development or offered staff development for those who taught health education on at least 1 of the 14 health topics. Specifically, more than half of all districts provided funding for staff development or offered staff development for those who taught health education on alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, human sexuality, injury

Table 4. Percentage of All States and Districts That Provided Funding for Staff Development or Offered Staff Development for Those Who Teach Health Education* and Percentage of Elementary School Classes Covering Required Health Instruction and Required Health Education Courses in Middle or High School That Had a Teacher Who Received Staff Development* and Who Wanted Staff Development on Health Topics and Teaching Methods, SHPPS 2006

	% of All States That Provided Funding for or Offered Staff Development	% of All Districts That Provided Funding for or Offered Staff Development	% of Classes or Courses That Had a Teacher Who Received Staff Development	% of Classes or Courses That Had a Teacher Who Wanted Staff Development
Health Topic				
Alcohol-use or other drug-use prevention	82.0	71.0	26.6	29.1
Asthma awareness	63.3	45.9	23.6	26.9
Emotional and mental health	59.6	58.6	31.6	40.4
Food-borne illness prevention	47.9	41.3	16.7	19.5
HIV prevention	84.0	61.5	22.9	16.7
Human sexuality	68.0	52.7	12.9	14.2
Injury prevention and safety	76.0	66.2	41.3	20.3
Nutrition and dietary behavior	88.0	65.3	31.1	45.5
Other STD prevention	80.0	60.6	14.4	15.3
Physical activity and fitness	82.4	75.3	34.3	35.7
Pregnancy prevention	72.0	47.4	7.2	12.0
Suicide prevention	66.7	56.1	14.0	21.3
Tobacco-use prevention	82.4	67.5	21.4	24.4
Violence prevention	85.1	77.6	59.4	38.0
Teaching Method				
Assessing or evaluating students in health education	73.5	49.9	23.4	33.4
Encouraging family or community involvement	79.2	64.2	41.4	25.8
Teaching skills for behavior change	85.7	66.8	52.5	34.5
Teaching students of various cultural backgrounds	60.4	46.1	43.3	22.7
Teaching students with limited English proficiency	36.2	44.8	35.9	23.3
Teaching students with long-term physical, medical, or cognitive disabilities	57.1	58.5	56.1	26.5
Using classroom management techniques	77.1	74.9	70.5	32.4
Using interactive teaching methods	85.4	66.1	63.6	24.7

HIV, human immunodeficiency virus; STD, sexually transmitted disease.

*During the 2 years preceding the study.

prevention and safety, nutrition and dietary behavior, other STD prevention, physical activity and fitness, suicide prevention, tobacco-use prevention, and violence prevention. Less than half of all districts provided funding for staff development or offered staff development for those who taught health education on asthma awareness, food-borne illness prevention, and pregnancy prevention. More than half of all districts provided funding for staff development or offered staff development on encouraging family or community involvement; teaching skills for behavior change; teaching students with long-term physical, medical, or cognitive disabilities; using classroom management techniques; and using interactive teaching methods. Less than half of all districts provided funding for staff development or offered staff development on assessing or evaluating students in health education, teaching students of various cultural backgrounds, and teaching students with limited English proficiency.

Collaboration. State-level health education staff often collaborate with other staff in the state education agency. During the 12 months preceding the study, state-level health education staff worked on health education activities with nutrition or food service staff in 94.1% of states, with physical education staff in 82.4%, with health services staff in 74.5%, and with mental health or social services staff in 70.6%. State-level health education staff also collaborated with staff from other agencies and organizations. During the 12 months preceding the study, in at least half of all states, state-level health education staff worked on health education activities with the state health department (98.0%); a state-level school health committee, council, or team (94.0%); colleges or universities (92.2%); a state-level health organization (eg, American Heart Association or American Cancer Society) (90.0%); the state-level American Alliance for Health, Physical Education, Recreation, and Dance (86.0%); a

state-level nurses' association (82.0%); the state mental health or social services agency (74.0%); businesses (62.7%); and a state-level physicians' organization (eg, American Academy of Pediatrics) (62.0%).

District-level health education staff collaborate with other staff in the district office. During the 12 months preceding the study, district-level health education staff worked on health education activities with general curriculum coordinators or supervisors in 65.2% of districts, physical education staff in 63.9%, health services staff in 55.3%, nutrition or food service staff in 55.3%, and mental health or social services staff in 38.9%. During the 12 months preceding the study, district-level health education staff also worked on health education activities with a local law enforcement agency (64.6%), a health organization (63.6%), local fire or emergency services (55.1%), a local health department (48.1%), a local mental health or social services agency (44.6%), a local hospital (35.9%), local business (26.8%), a local college or university (26.4%), and a local service club (eg, Rotary Club) (22.4%).

Evaluation. During the 2 years preceding the study, 66.6% of districts nationwide evaluated their health education curricula, 63.3% evaluated their health education policies, and 50.3% evaluated their staff development or in-service programs.

Health Education Coordinators. Among the 94.1% of states that had someone who oversees or coordinates school health education, 89.6% had that person serve as the respondent to the state-level health education SHPPS questionnaire. Among those respondents, 100% had an undergraduate degree: 57.1% majored in health education; 50.0% in physical education; 9.5% in some other education field; 7.1% in biology or another science; 4.8% in kinesiology, exercise physiology, or exercise science; 2.4% in public health; and 2.4% in home economics or family and consumer science. Among the state-level coordinators who served as the SHPPS respondent, 64.3% had an undergraduate minor: 25.9% minored in health education, 18.5% in some other education field, 7.4% in physical education, and 7.4% in biology or another science. Among the state-level coordinators who served as the SHPPS respondent, 85.7% had a graduate degree: the most common graduate degree was in health education (40.5%), followed by some other education field (29.7%); physical education (27.0%); kinesiology, exercise physiology, or exercise science (8.1%); public health (2.7%); and biology or another science (2.7%). Among the state-level coordinators who served as the SHPPS respondent, 89.2% had an undergraduate major, an undergraduate minor, or a graduate degree in health education. One third (32.6%) were CHES. More than half (55.8%) were certified,

licensed, or endorsed by the state to teach health education at the elementary school level, 69.8% at the middle school level, and 69.8% at the high school level.

At the district level, 70.3% of districts had someone who oversees or coordinates school health education. Unfortunately, the number of these coordinators who served as the respondent to the district-level health education SHPPS questionnaire was too small for meaningful analysis of the data about their qualifications.

Changes Between 2000 and 2006 at the State and District Levels. Between 2000 and 2006, the percentage of states that had adopted a policy stating that districts or schools will follow national or state health education standards or guidelines increased from 60.8% to 74.5%, whereas the percentage of states that had adopted a policy encouraging districts or schools to follow health education standards or guidelines decreased from 29.4% to 7.8%. Similarly, the percentage of districts requiring schools to follow national, state, or district health education standards or guidelines increased from 68.8% to 79.3%.

Between 2000 and 2006, the percentage of states and districts requiring schools to teach about topics related to human sexuality, violence prevention, and injury prevention increased. The percentage of states requiring elementary schools to teach about suicide prevention increased from 26.0% to 44.0%; the percentage requiring middle schools to teach about human sexuality and about pregnancy prevention increased from 46.0% to 58.8% and from 45.1% to 58.8%, respectively; and the percentage requiring high schools to teach about human sexuality and about pregnancy prevention increased from 46.9% to 60.8% and from 45.1% to 58.0%, respectively. The percentage of districts requiring elementary schools to teach about injury prevention and safety and about violence prevention increased from 66.2% to 77.4% and from 73.4% to 83.6%, respectively; the percentage requiring middle schools to teach about injury prevention and safety and about violence prevention increased from 66.7% to 80.3% and from 71.6% to 83.8%, respectively; and the percentage requiring high schools to teach about violence prevention increased from 74.5% to 85.0%.

The percentage of states providing plans for how to assess or evaluate students in elementary school health education increased from 49.0% to 60.0%, but the percentage of states providing other types of materials decreased between 2000 and 2006. Specifically, the percentage of states providing a chart describing the scope and sequence of instruction for elementary school and for high school health education decreased from 62.0% to 51.0% and from 57.1% to 43.1%, respectively, and the percentage providing a high school health education curriculum

decreased from 49.0% to 33.3%. In addition, the percentage of states providing a list of 1 or more recommended health education curricula decreased for elementary schools (from 56.0% to 39.2%), middle schools (from 62.0% to 41.2%), and high schools (from 61.2% to 43.1%).

Professional preparation expectations increased among some states and districts between 2000 and 2006. The percentage of states adopting a policy stating that newly hired staff who teach health education at the middle school and high school levels will be CHES increased from 2.0% to 15.7% and from 2.0% to 17.6%, respectively. Similarly, the percentage of districts adopting such a policy at the middle school and high school levels increased from 12.2% to 35.0% and from 16.0% to 40.6%, respectively. Further, the percentage of districts adopting a policy stating that newly hired staff who teach health education at the middle school level will be certified, licensed, or endorsed by the state to teach health education increased from 57.8% to 69.7%.

Between 2000 and 2006, the percentage of states adopting a policy stating that teachers will earn continuing education credits on health topics to maintain state certification, licensure, or endorsement to teach health education increased from 47.8% to 61.7%. To support this type of staff development policy, an increased percentage of states provided funding for staff development or offered staff development for those who taught health education on injury prevention and safety (from 39.6% to 76.0%), nutrition and dietary behavior (from 76.0% to 88.0%), physical activity and fitness (from 68.8% to 82.4%), and suicide prevention (from 50.0% to 66.7%). The percentage of states providing funding for staff development or offering staff development for those who taught health education on teaching students with long-term physical, medical, or cognitive disabilities also increased from 46.0% to 57.1%. However, a decreased percentage of states provided funding for staff development or offered staff development for those who taught health education on HIV prevention (from 96.1% to 84.0%) and other STD prevention (from 92.2% to 80.0%). An increased percentage of districts provided funding for staff development or offered staff development on emotional and mental health (from 44.0% to 58.6%), injury prevention and safety (from 40.0% to 66.2%), nutrition and dietary behavior (43.3% to 65.3%), physical activity and fitness (43.3% to 75.3%), other STD prevention (from 47.5% to 60.6%), suicide prevention (from 41.5% to 56.1%), and violence prevention (from 62.1% to 77.6%). More districts also provided funding for staff development or offered staff development on encouraging family and community involvement (from 51.0% to 64.2%), teaching skills for behavior change (from

54.6% to 66.8%), and teaching students with limited English proficiency (from 27.7% to 44.8%).

Between 2000 and 2006, increased collaboration was detected between state-level health education staff and state-level school nutrition or food service staff (from 75.5% to 94.1%) and with businesses (from 49.0% to 62.7%) and decreased collaboration was detected with state-level health services staff (from 90.0% to 74.5%). Increased collaboration was detected between district-level health education staff and district-level nutrition or food service staff (from 27.7% to 55.3%).

Evaluation activities at the district level increased between 2000 and 2006. Specifically, increases were noted in the percentage of districts evaluating health education curricula (from 53.2% to 66.6%), health education policies (from 37.3% to 63.3%), and health education staff development programs (from 36.6% to 50.3%).

Health Education at the School Level

Health Education Requirements. Nationwide, 92.0% of all schools required students to receive instruction on at least 1 of the 14 health topics. Almost two thirds (61.0%) of all schools required instruction on health topics in at least 1 specific grade. Among all schools that had kindergarten students, 35.8% required health education in kindergarten, 44.6% of all schools that had 1st-grade students required it in 1st grade, 43.5% required it in 2nd grade, 47.7% required it in 3rd grade, 50.3% required it in 4th grade, 60.4% required it in 5th grade, 52.0% required it in 6th grade, 53.3% required it in 7th grade, 49.9% required it in 8th grade, 34.3% required it in 9th grade, 25.2% required it in 10th grade, 12.0% required it in 11th grade, and 8.5% required it in 12th grade.

The duration of required instruction on health topics varied by grade. Rounding numbers to the nearest whole number, required instruction on health topics was taught for a median of 32 weeks in kindergarten, 31 weeks in grades 1-2, 19 weeks in grade 3, 17 weeks in grades 4-5, 12 weeks in grades 6-7, 11 weeks in grade 8, 17 weeks in grade 9, 15 weeks in grade 10, 14 weeks in grade 11, and 12 weeks in grade 12. Required instruction on health topics was taught for a median of 2 days per week in each of grades K-4, for a median of 3 days per week in grade 5, 2 days per week in grade 6, 3 days per week in grades 7-8, and 5 days per week in grades 9-12. Each class period of required instruction on health topics lasted a median of 28 minutes in each of grades K-3, a median of 32 minutes in grade 4, 38 minutes in grade 5, 45 minutes in grades 6-8, 54 minutes in grade 9, 52 minutes in grades 10-11, and 51 minutes in grades 12. Across all grades, the median duration of the required instruction on health topics was 17 weeks, 5 days per week, and 45 minutes per session.

In some schools, health education was required but not in a specific grade. Nationwide, 56.6% of all schools required students to receive instruction on health topics as part of a specific class or course. This included 45.2% of elementary schools, 65.4% of middle schools, and 69.0% of high schools. This required instruction had to be taken before students were promoted to the next school level.

In addition to required instruction on health topics, 39.8% of all middle schools and high schools offered elective courses that include instruction on health topics. Health education also was offered outside the traditional classroom setting. For example, 67.5% of schools used school assemblies and 28.8% used health fairs to provide information about health topics to students. Health education centers were defined as offering instruction on health topics in place of or to enhance health education provided by schools. They are either independent, nonprofit organizations or affiliated with other public institutions, such as hospitals, science museums, or universities. Nationwide, 53.3% of schools used health education centers to provide information on health topics to students.

The perceived importance of an academic subject is often reflected in the grading system used to evaluate students. Among the 92.0% of schools that required students to receive instruction on at least 1 of the 14 health topics, 71.6% provided letter or numerical grades for required health education, 10.8% used a pass/fail system, and 14.1% did not provide grades. When determining grade point averages, honor roll status, or other indicators of academic standing, 63.9% of schools used grades from required health education in the same way as grades from other subject areas. In 29.7% of schools, if students failed required health education, they were required to repeat it.

Nationwide, 75.7% of all schools had students with long-term (defined as ongoing, not temporary disability like a broken bone) physical, medical, or cognitive disabilities. In 76.7% of these schools, health education was included in those students' individualized education programs (defined as documents written by school administrators, teachers, and parents that identify annual goals, strategies, or services provided for students with special educational needs) or 504 plans (defined as documents that describe a program of instructional services to assist students with special needs who are in a regular educational setting).

Elementary School Instruction. Nationwide, 83.2% of all elementary schools followed national, state, or district health education standards or guidelines. These standards or guidelines were based on the *National Health Education Standards*¹⁶ in 65.6% of all elementary schools. Further, almost two thirds or more of all elementary schools had adopted goals and objectives for health education that specifically

addressed the knowledge and skills articulated in the *National Health Education Standards*¹⁶ (Table 1).

Nationwide, 92.6% of elementary schools required students to receive instruction on at least 1 of the 14 health topics and 70.0% required instruction on at least 7 of the 14. Only 6.4% of elementary schools required instruction on all 14. More than two thirds of all elementary schools required students to receive instruction on alcohol-use or other drug-use prevention, emotional and mental health, injury prevention and safety, nutrition and dietary behavior, physical activity and fitness, tobacco-use prevention, and violence prevention (Table 2). Less than half required students to receive instruction on asthma awareness, food-borne illness prevention, HIV prevention, human sexuality, other STD prevention, pregnancy prevention, and suicide prevention. Among elementary schools that required students to receive instruction on HIV prevention, human sexuality, other STD prevention, or pregnancy prevention, 90.6% notified parents or guardians before students received instruction on these topics and 94.3% allowed parents or guardians to exclude their children from receiving such instruction.

Those who taught health education in elementary schools were provided with a variety of materials (Table 3). In particular, they were most likely to be provided with goals, objectives, and expected health outcomes and a health education curriculum.

Middle School Instruction. Nationwide, 81.3% of all middle schools followed national, state, or district health education standards or guidelines. These standards or guidelines were based on the *National Health Education Standards*¹⁶ in 69.0% of all middle schools. Further, more than two thirds of all middle schools had adopted goals and objectives for health education that specifically addressed the knowledge and skills articulated in the *National Health Education Standards*¹⁶ (Table 1).

Nationwide, 90.1% of middle schools required students to receive instruction on at least 1 of the 14 health topics; 83.0% required instruction on at least 7 of the 14. Only 20.6% of middle schools required instruction on all 14. More than two thirds of all middle schools required students to receive instruction on alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, human sexuality, injury prevention and safety, nutrition and dietary behavior, other STD prevention, physical activity and fitness, tobacco-use prevention, and violence prevention (Table 2). Less than two thirds of all middle schools required students to receive instruction on asthma awareness, food-borne illness prevention, pregnancy prevention, and suicide prevention. Among middle schools that required students to receive instruction on HIV prevention, human sexuality, other STD prevention, or pregnancy prevention, 79.4%

notified parents or guardians before students received instruction on these topics and 95.8% allowed parents or guardians to exclude their children from receiving such instruction.

Those who teach health education in middle school were provided with a variety of materials (Table 3). In particular, they were most likely to be provided with goals, objectives, and expected health outcomes and a health education curriculum.

High School Instruction. Nationwide, 88.6% of all high schools followed national, state, or district health education standards or guidelines. These standards or guidelines were based on the *National Health Education Standards*¹⁶ in 71.1% of all high schools. Further, more than three fourths of all high schools had adopted goals and objectives for health education that specifically addressed the knowledge and skills articulated in the *National Health Education Standards*¹⁶ (Table 1).

Nationwide, 93.6% of high schools required students to receive instruction on at least 1 of the 14 health topics; 89.7% required instruction on at least 7 of the 14. About one third (35.8%) required instruction on all 14. More than three fourths of all high schools required students to receive instruction on alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, human sexuality, injury prevention and safety, nutrition and dietary behavior, other STD prevention, physical activity and fitness, pregnancy prevention, suicide prevention, tobacco-use prevention, and violence prevention (Table 2). Less than three fourths of all high schools required students to receive instruction on asthma awareness and food-borne illness prevention. Among high schools that required students to receive instruction on HIV prevention, human sexuality, other STD prevention, or pregnancy prevention, 63.3% notified parents or guardians before students received instruction on these topics and 87.0% allowed parents or guardians to exclude their children from receiving such instruction.

Those who taught health education in high schools were provided with a variety of materials (Table 3). In particular, they were most likely to be provided with goals, objectives, and expected health outcomes and a health education curriculum.

Staffing and Professional Preparation. Nationwide, 67.8% of schools had someone who oversees or coordinates health education. Unfortunately, the number of these coordinators who served as the respondent to the school-level health education SHPPS questionnaire was too small for meaningful analysis of the data about their qualifications.

Health education was usually taught by more than 1 teacher or staff member in each school; consequently, the following percentages add up to greater than 100%. At the elementary school level,

regular classroom teachers taught required health instruction in 85.7% of schools, physical education teachers or specialists in 55.0%, school nurses in 40.8%, school counselors in 31.4%, and health education teachers or specialists in 19.0%.

At the middle school level, health education teachers taught required health education in 58.8% of schools, other teachers in 55.1%, physical education teachers in 52.6%, school nurses in 20.6%, and school counselors in 19.8%.

At the high school level, health education teachers taught required health education in 78.4% of schools, physical education teachers in 48.2%, other teachers in 30.8%, school nurses in 18.8%, and school counselors in 11.1%.

Nationwide, 35.5% of elementary schools, 56.9% of middle schools, and 76.8% of high schools required newly hired staff who teach required health instruction to have undergraduate or graduate training in health education. Further, 32.9% of elementary schools, 50.7% of middle schools, and 72.8% of high schools required newly hired staff who teach required health instruction to be certified, licensed, or endorsed by the state in health education. In addition, 35.7% of elementary schools, 45.4% of middle schools, and 56.0% of high schools required such staff to earn continuing education credits on health education topics. Nationwide, 9.5% of middle schools and 16.5% of high school required such staff to be CHES.

Collaboration. Health education staff collaborated with other school staff on health education activities. During the 12 months preceding the study, school-level health education staff worked on health education activities with physical education staff in 65.8% of schools, health services staff in 56.0%, mental health or social services staff in 53.0%, and nutrition or food service staff in 39.3%. Health education staff also collaborated with staff from outside agencies or organizations. During the 12 months preceding the study, school-level health education staff worked on health education activities with a health organization in 53.8% of schools, a local law enforcement agency in 48.5%, local fire or emergency medical services in 43.7%, a local health department in 38.4%, a local mental health or social services agency in 33.3%, a local hospital in 25.8%, a local college or university in 24.6%, a local business in 21.3%, and a local service club (eg, Rotary Club) in 16.7%.

Changes Between 2000 and 2006 at the School Level. Between 2000 and 2006, the percentage of schools requiring newly hired staff who teach health topics to be certified, licensed, or endorsed by the state in health education increased from 35.0% to 45.9%. No other changes in school-level estimates met the criteria for inclusion.

Health Education at the Classroom Level

Elementary schools generally have a class structure based on grade, whereas middle schools and high schools have a course structure. This means that in elementary schools, required instruction on health topics usually occurs as part of the curriculum for each (or a particular) grade, not as a separate course of study. In contrast, 43.2% of required health education courses in middle and high school were devoted solely to health topics, 21.8% were a combined health education or physical education course, and 35.0% were mainly about some subject other than health, such as science, social studies, or language arts. The median enrollment for health education classes was 20.5 students in elementary schools, 24.3 students in middle schools, and 24.2 students in high schools.

Elementary School Instruction. For planning or teaching required health instruction, teachers in at least 1 class in more than half of elementary schools used state-, district-, or school-developed curricula or guidelines for health education (87.8%), materials from health organizations (79.2%), the *National Health Education Standards*¹⁶ (62.7%), a commercially developed teacher's guide (64.3%), a commercially developed curriculum (62.0%), and health education performance assessment materials (53.9%). In addition, teachers in at least 1 class in 44.2% of elementary schools used a commercially developed student textbook for planning or teaching, and students in 45.5% of elementary schools used a textbook for required health instruction in at least 1 class.

The percentage of all elementary schools teaching 14 health topics in at least 1 class as part of required health instruction was assessed. In more than two thirds of all elementary schools, teachers in at least 1 class taught alcohol-use or other drug-use prevention (77.2%), emotional and mental health (70.3%),

injury prevention and safety (83.4%), nutrition and dietary behavior (89.8%), physical activity and fitness (80.4%), tobacco-use prevention (79.1%), and violence prevention (85.3%). In less than half of all elementary schools, teachers in at least 1 class taught asthma awareness (35.1%), food-borne illness prevention (41.0%), HIV prevention (18.5%), human sexuality (23.7%), other STD prevention (7.0%), pregnancy prevention (7.0%), and suicide prevention (14.0%). Nationwide, 15.9% of elementary school classes covering HIV prevention, human sexuality, other STD prevention, or pregnancy prevention had at least 1 and a median of 1.5 students excused from attending class by a parent or guardian when these topics were presented. Table 5 shows the median number of hours of instruction teachers provided on 11 of the 14 health topics (among the elementary school classes in which the topic was taught as part of required health instruction).

Tables 6-18 describe the percentage of all elementary schools in which teachers in at least 1 class taught subtopics related to alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, human sexuality, injury prevention, nutrition and dietary behavior, physical activity, personal health and wellness, pregnancy prevention, STD prevention, suicide prevention, tobacco-use prevention, and violence prevention as part of required health instruction.

SHPPS 2006 also assessed the percentage of elementary schools providing opportunities to practice (eg, through role playing) communication, decision-making, or goal-setting skills as part of required health instruction. In more than half of all elementary schools, teachers in at least 1 class provided opportunities to practice these skills related to alcohol-use or other drug-use prevention (62.5%), emotional and mental health (56.5%), injury prevention and safety

Table 5. Median Number of Hours of Required Instruction That Teachers Provided on Health Topics,* by School Level, SHPPS 2006

Health Topic	Median Number of Hours of Instruction		
	Elementary School Classes	Middle School Courses	High School Courses
Alcohol-use or other drug-use prevention	2.6	5.5	7.0
Emotional and mental health	2.6	2.8	4.2
HIV prevention	1.1	1.5	2.2
Injury prevention and safety	2.1	1.8	2.4
Nutrition and dietary behavior	3.4	4.2	5.9
Other STD prevention	0.7	1.8	2.4
Physical activity and fitness	2.4	3.1	4.5
Pregnancy prevention	1.3	2.7	3.5
Suicide prevention	NA	0.4	1.4
Tobacco-use prevention	1.9	3.5	4.1
Violence prevention	2.6	2.5	2.5

HIV, human immunodeficiency virus; NA, not asked at this level; STD, sexually transmitted disease.

*Among the elementary school classes in which the topic was taught as part of required health instruction, and among the required health education courses in middle schools and high schools in which the topic was taught.

Table 6. Percentage of All Schools in Which Teachers Taught* Alcohol-Use or Other Drug-Use Prevention Topics as Part of Required Instruction, by School Level, SHPPS 2006

Alcohol-Use or Other Drug-Use Prevention Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Benefits of not using alcohol	68.8	80.4	91.4
Benefits of not using illegal drugs	70.7	79.4	90.3
Distinguishing between medicinal and nonmedicinal drug use	66.4	75.1	83.1
Drink equivalents and blood alcohol content	17.1	62.9	87.5
Effects of alcohol or other drug use on decision making	70.2	81.5	92.8
How many young people use alcohol or other drugs	34.0	66.3	80.6
How students can influence or support others in efforts to prevent alcohol or other drug use	66.9	79.2	88.2
How students can influence or support others in efforts to quit using alcohol or other drugs	55.4	74.6	83.9
How to find valid information on services related to alcohol-use or other drug-use prevention or cessation	29.2	66.0	81.8
Influence of families on alcohol or other drug use	62.5	79.2	91.2
Influence of the media on alcohol or other drug use	51.0	77.9	89.3
Long-term health consequences of alcohol use and addiction	61.9	80.2	92.8
Long-term health consequences of illegal drug use and addiction	63.8	78.1	90.6
Making a personal commitment not to use alcohol or other drugs	70.2	72.2	79.9
Resisting peer pressure to use alcohol or other drugs	71.4	81.6	92.2
Short-term health consequences of alcohol use and addiction	68.8	79.7	90.9
Short-term health consequences of illegal drug use and addiction	66.9	77.5	89.8
Social or cultural influences on alcohol or other drug use	54.9	76.8	87.3

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

(61.5%), nutrition and dietary behavior (63.3%), physical activity and fitness (53.0%), tobacco-use prevention (61.9%), and violence prevention (70.5%). In only 10.4% of elementary schools did teachers in at least 1 class provide opportunities to practice these skills related to human sexuality. In 48.5% of elementary schools, teachers in at least 1

class provided students with opportunities to taste new, healthful foods as part of required health instruction.

Middle School Instruction. In more than half of middle schools, teachers in at least 1 required health education course used state-, district-, or school-developed curricula or guidelines for health education

Table 7. Percentage of All Schools in Which Teachers Taught* Emotional and Mental Health Topics as Part of Required Instruction, by School Level, SHPPS 2006

Emotional and Mental Health Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Appropriate ways to express and deal with emotions and feelings	67.0	74.1	86.6
Being sensitive to the feelings of others	67.7	75.1	86.6
Causes, signs, and effects of depression	30.1	63.5	82.6
Causes, signs, and effects of stress	47.3	73.1	88.5
Establishing and maintaining healthy relationships	63.9	73.3	85.4
Feelings and emotions associated with loss and grief	53.7	62.2	74.8
Healthy ways to express affection, love, friendship, and concern	65.8	70.1	79.7
How emotions change during adolescence	NA	70.1	81.8
How mental illness is diagnosed and treated	12.1	39.1	65.0
How students can influence or support others to promote emotional and mental health	54.2	67.6	78.3
How to find valid information or services related to emotional or mental health	23.6	58.4	76.5
Influence of families on emotional and mental health	44.0	65.6	81.5
Influence of the media on emotional and mental health	26.9	53.2	65.0
Interrelationships of physical, mental, emotional, social, and spiritual health	42.9	68.1	82.3
Positive and negative ways of dealing with stress	56.9	74.9	87.7
Social or cultural influences on emotional and mental health	33.8	61.4	74.2
Strategies for controlling impulsive behaviors	59.5	58.3	67.9
When to seek help for mental health problems	29.6	59.5	77.8

NA, not asked at this level.

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

Table 8. Percentage of All Schools in Which Teachers Taught* HIV Prevention Topics as Part of Required Instruction, by School Level, SHPPS 2006

HIV Prevention Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Compassion for persons living with HIV or AIDS	11.0	57.9	69.2
How HIV affects the human body	12.2	68.9	81.1
How HIV is diagnosed and treated	6.4	58.2	76.7
How HIV is transmitted	14.8	71.6	84.6
How to find valid information or services related to HIV or HIV counseling or testing	7.6	50.9	75.8
How to prevent HIV infection	15.4	69.5	85.2
Signs and symptoms of HIV and AIDS	9.6	63.7	80.0

AIDS, acquired immunodeficiency syndrome; HIV, human immunodeficiency virus.

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

(86.0%); materials from health organizations (73.3%); a commercially developed teacher's guide (71.5%); health education performance assessment materials (67.8%); the *National Health Education Standards*¹⁶ (58.7%); and a commercially developed curriculum (51.2%). In 74.8% of middle schools, teachers in at least 1 required health education course used a commercially developed student textbook for planning or teaching, and students in 78.4% of middle schools used a textbook in at least 1 required health education course.

The percentage of all middle schools teaching 14 health topics in at least 1 required health education course was assessed. In more than two thirds of all middle schools, teachers in at least 1 required health education course taught alcohol-use or other drug-use prevention (82.8%), emotional and mental health (79.9%), HIV prevention (73.5%), human sexuality (67.8%), injury prevention and safety (76.8%), nutrition and dietary behavior (84.8%), other STD prevention (68.0%), physical activity and fitness (77.9%), tobacco-use prevention (81.5%),

and violence prevention (73.2%). In fewer than two thirds of all middle schools, teachers in at least 1 required health education course taught asthma awareness (46.6%), food-borne illness prevention (54.0%), pregnancy prevention (61.4%), and suicide prevention (52.4%). Nationwide, 26.1% of required health education courses in middle schools covering HIV prevention, human sexuality, other STD prevention, or pregnancy prevention had at least 1 and a median of 1.1 students excused from attending class by a parent or guardian when these topics were presented. Table 5 shows the median number of hours of instruction teachers provided on 11 of the 14 health topics (among the required health education courses in middle schools in which the topic was taught).

Tables 6-18 describe the percentage of all middle schools in which teachers in at least 1 class taught subtopics related to alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, human sexuality, injury prevention, nutrition and dietary behavior, physical activity, personal

Table 9. Percentage of All Schools in Which Teachers Taught* Human Sexuality Topics as Part of Required Instruction, by School Level, SHPPS 2006

Human Sexuality Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Abstinence as the most effective method to avoid pregnancy, HIV, and other STDs	12.3	75.8	86.6
Condom efficacy	NA	42.0	65.4
Dating and relationships	9.2	66.2	79.0
How students can influence or support others to make healthy decisions related to sexual behavior	13.8	67.1	79.8
How to correctly use a condom	NA	21.0	38.5
Human development issues (eg, reproductive anatomy and puberty)	22.2	69.4	76.7
Influence of families on sexual behavior	6.5	45.2	62.1
Influence of the media on sexual behavior	12.4	60.3	77.1
Marriage and commitment	8.5	60.4	69.2
Resisting peer pressure to engage in sexual behavior	15.8	72.6	82.8
Risks associated with having multiple sexual partners	NA	65.2	80.7
Sexual identity and sexual orientation	NA	37.4	47.5
Social or cultural influences on sexual behavior	14.3	61.1	73.5

HIV, human immunodeficiency virus; NA, not asked at this level; STD, sexually transmitted disease.

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

Table 10. Percentage of All Schools in Which Teachers Taught* Injury Prevention Topics as Part of Required Instruction, by School Level, SHPPS 2006

Injury Prevention Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Cardiopulmonary resuscitation	15.2	37.1	48.6
Emergency preparedness	63.6	56.4	56.7
Fire safety	72.4	52.2	39.9
First aid	49.8	56.2	55.8
Gun safety	26.9	18.5	27.4
How students can influence or support others to prevent injuries	68.6	58.7	55.7
How to find valid information or services to prevent injuries	31.3	47.7	49.1
Influence of families on behaviors related to safety	51.1	47.0	45.8
Influence of the media on behaviors related to safety	39.7	43.5	44.5
Motor vehicle occupant safety (eg, seatbelt use)	68.5	54.3	56.3
Pedestrian safety	68.6	35.0	29.5
Playground safety	79.9	NA	NA
Poisoning prevention	47.0	39.8	49.8
Relationship between alcohol or other drug use and injuries	51.3	60.0	64.0
Resisting peer pressure that would increase risk of injuries	69.9	60.9	58.7
Social or cultural influences on behaviors related to safety	37.8	41.8	45.1
Use of protective equipment for biking, skating, or other sports	69.2	55.4	50.0
Water safety	54.6	42.8	38.0

NA, not asked at this level.

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

health and wellness, pregnancy prevention, STD prevention, suicide prevention, tobacco-use prevention, and violence prevention as part of required health instruction.

SHPPS 2006 also assessed the percentage of middle schools providing opportunities to practice (eg, through role playing) communication, decision-making, or goal-setting skills as part of a required health education course. In more than half of all middle schools, teachers in at least 1 required health education course provided opportunities to practice these skills related to alcohol-use or other drug-use prevention (71.8%), emotional and mental health (53.9%), human sexuality (50.5%), nutrition and dietary behavior (55.8%), tobacco-use prevention (66.6%), and violence prevention (54.3%). In fewer than half of all middle schools, teachers in at least 1 required health education course provided opportunities to practice these skills related to injury prevention and safety (44.8%) and physical activity and fitness (44.7%). In 24.3% of middle schools, teachers in at least 1 required health education course provided students with opportunities to taste new, healthful foods.

High School Instruction. In more than half of high schools, teachers in at least 1 required health education course used state-, district-, or school-developed curricula or guidelines for health education (90.6%); materials from health organizations (80.3%); a commercially developed teacher's guide (78.7%); health education performance assessment materials (72.5%); and the *National Health Education Standards*¹⁶ (63.2%). In 44.0% of high schools, teachers in at least 1 required health education

course used a commercially developed curriculum for planning or teaching. In 82.3% of high schools, teachers in at least 1 required health education course used a commercially developed student textbook for planning or teaching, and students in 84.7% of high schools used a textbook in at least 1 required health education course.

The percentage of all high schools teaching 14 health topics in at least 1 required health education course was assessed. In more than two thirds of all high schools, teachers in at least 1 required health education course taught alcohol-use or other drug-use prevention (93.3%), emotional and mental health (90.0%), HIV prevention (85.7%), human sexuality (73.7%), injury prevention and safety (71.6%), nutrition and dietary behavior (86.7%), other STD prevention (86.3%), physical activity and fitness (80.2%), pregnancy prevention (79.9%), suicide prevention (79.7%), tobacco-use prevention (91.2%), and violence prevention (78.1%). In fewer than two thirds of all high schools, teachers in at least 1 required health education course taught about asthma awareness (50.5%) and food-borne illness prevention (64.6%). Nationwide, 14.3% of required health education courses in high schools covering HIV prevention, human sexuality, other STD prevention, or pregnancy prevention had at least 1 and a median of 1.0 student excused from attending class by a parent or guardian when these topics were presented. Table 5 shows the median number of hours of instruction teachers provided on 11 of the 14 health topics (among the required health education courses in high schools in which the topic was taught).

Table 11. Percentage of All Schools in Which Teachers Taught* Nutrition and Dietary Behavior Topics as Part of Required Instruction, by School Level, SHPPS 2006

Nutrition and Dietary Behavior Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Accepting body size differences	71.2	77.0	80.6
Balancing food intake and physical activity	80.9	83.1	84.5
Benefits of healthy eating	87.9	84.3	86.1
Choosing foods that are low in fat, saturated fat, and cholesterol	72.5	81.2	84.3
Dietary Guidelines for Americans	NA	67.0	73.7
Eating a variety of foods	87.2	82.9	85.3
Eating disorders	NA	74.0	81.7
Eating more calcium-rich foods	66.4	69.1	71.9
Eating more fruits, vegetables, and grain products	86.6	83.1	84.7
Food guidance using MyPyramid	76.9	76.1	77.7
Food safety	59.7	61.7	71.1
How students can influence or support others' healthy dietary behavior	55.5	60.4	70.6
How to find valid information or services related to nutrition and dietary behavior	42.1	63.9	74.0
Importance of eating breakfast	84.6	81.1	83.5
Importance of water consumption	82.1	81.7	83.8
Influence of families on dietary behavior	51.1	68.3	79.9
Influence of the media on dietary behavior	60.7	73.7	80.2
Making healthy choices while eating at restaurants	51.4	61.6	67.8
Preparing healthy meals and snacks	76.4	75.9	76.7
Resisting peer pressure related to unhealthy dietary behaviors	43.4	61.0	67.4
Risks of unhealthy weight control practices	53.7	82.5	84.6
Social or cultural influences on dietary behaviors	48.5	71.9	81.0
Using food labels	68.0	76.9	81.5
Using salt and sodium in moderation	NA	70.6	75.8
Using sugars in moderation	83.3	79.6	77.9

NA, not asked at this level.

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

Tables 6-18 describe the percentage of all high schools in which teachers in at least 1 class taught subtopics related to alcohol-use or other drug-use prevention, emotional and mental health, HIV prevention, human sexuality, injury prevention, nutrition and dietary behavior, physical activity, personal health and wellness, pregnancy prevention, STD prevention, suicide prevention, tobacco-use prevention, and violence prevention as part of required health instruction.

SHPPS 2006 also assessed the percentage of high schools providing opportunities to practice (eg, through role playing) communication, decision-making, or goal-setting skills as part of a required health education course. In more than half of all high schools, teachers in at least 1 required health education course provided opportunities to practice these skills related to alcohol-use or other drug-use prevention (80.7%), emotional and mental health (65.1%), human sexuality (61.8%), nutrition and dietary behavior (64.6%), physical activity and fitness (54.5%), tobacco-use prevention (72.0%), and violence prevention (55.3%). In 48.9% of all high schools, teachers in at least 1 required health education course provided opportunities to practice these

skills related to injury prevention and safety. In 24.7% of high schools, teachers in at least 1 required health education course provided students with opportunities to taste new, healthful foods.

Teaching Methods. Teachers used a variety of teaching methods in elementary school classes that cover required health instruction and in required health education courses in middle schools and high schools. Nationwide, teachers sometimes, almost always, or always used group discussions in 92.0% of these classes or courses; cooperative group activities in 81.1%; role play, simulations, or practice in 67.4%; visual, performing, or language arts in 60.6%; audiovisual media, such as videos in 59.2%; the internet in 44.0%; guest speakers in 41.6%; peer teaching in 38.0%; pledges or contracts for changing behavior or abstaining from a behavior in 36.7%; computer-assisted instruction in 25.6%; and health education programs available through videoconferencing or other distance learning methods in 7.3%.

Teachers also used a variety of methods to highlight diversity or the values of various cultures when teaching about health topics in elementary school classes that cover required health instruction or in required health education courses in middle schools and high

Table 12. Percentage of All Schools in Which Teachers Taught* Personal Health and Wellness Topics as Part of Required Instruction, by School Level, SHPPS 2006

Personal Health and Wellness Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Benefits of rest and sleep	92.3	86.1	91.2
Consumer health (eg, choosing sources of health-related information, products, and services wisely)	44.1	63.8	73.9
Dental and oral health	74.5	54.6	55.1
Difference between infectious and chronic diseases	42.1	67.8	80.9
Environmental health (eg, how air and water quality can affect health)	67.5	66.3	68.9
Growth and development	73.3	80.8	75.9
Hand washing or hand hygiene	90.4	77.4	74.5
How common infectious illnesses like the flu are transmitted	82.6	77.9	84.4
How positive health behaviors can benefit people throughout the life span	88.0	88.6	94.2
Immunizations	39.0	55.3	59.4
Importance of health screenings and checkups	57.5	53.5	80.8
Potential health and social consequences of popular fads and trends	52.8	76.1	84.6
Sun safety or skin cancer prevention	68.3	75.9	77.7
Ways to prevent vision and hearing loss	49.8	44.5	56.6

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

schools. Nationwide, in more than half of schools teachers in at least 1 class or required course modified their teaching methods to match students' learning styles, health beliefs, or cultural values (89.1%); used textbooks or curricular materials reflective of various cultures (74.7%); taught about cultural differences

and similarities (73.0%); and asked students' families to share their own cultural experiences related to health topics (60.8%). In 38.6% of schools, teachers in at least 1 class or required course used textbooks or curricular materials designed for students with limited English proficiency.

Table 13. Percentage of All Schools in Which Teachers Taught* Physical Activity Topics as Part of Required Instruction, by School Level, SHPPS 2006

Physical Activity Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Dangers of using performance-enhancing drugs (eg, steroids)	NA	61.4	73.0
Decreasing sedentary activities (eg, television watching)	72.7	71.5	75.6
Developing an individualized physical activity plan	NA	45.4	57.5
Difference between physical activity, exercise, and fitness	53.0	61.3	72.0
Health-related fitness (ie, cardiovascular endurance, muscular endurance, muscular strength, flexibility, and body composition)	63.8	72.0	76.2
How much physical activity is enough (ie, determining frequency, intensity, time, and type of physical activity)	NA	60.1	69.0
How students can influence or support others to engage in physical activity	60.6	59.8	68.6
How to find valid information or services related to physical activity and fitness	35.0	50.3	64.9
Influence of families on physical activity	51.1	53.8	63.3
Influence of the media on physical activity	42.9	52.8	63.1
Monitoring progress toward reaching goals in an individualized fitness plan	NA	44.5	54.3
Opportunities for physical activity in the community	60.6	54.1	65.0
Overcoming barriers to physical activity	46.6	57.9	65.5
Phases of a workout (ie, warm up, workout, and cool down)	48.6	60.1	68.5
Physical, psychological, or social benefits of physical activity	72.1	70.3	78.0
Preventing injury during physical activity	62.5	62.9	71.6
Resisting peer pressure that discourages physical activity	38.4	48.1	55.9
Social or cultural influences on physical activity	43.5	51.7	61.8
Weather-related safety (eg, avoiding heat stroke, hypothermia, and sunburn while physically active)	56.8	61.2	68.2

NA, not asked at this level.

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

Table 14. Percentage of All Schools in Which Teachers Taught* Pregnancy Prevention Topics as Part of Required Instruction, by School Level, SHPPS 2006

Pregnancy Prevention Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Educational and social impact of teen pregnancy	3.2	54.2	74.8
How to find valid information or services related to pregnancy or pregnancy testing	1.9	43.5	64.8
Methods of contraception	NA	32.5	58.1
Risks associated with teen pregnancy	3.2	52.2	75.9

NA, not asked at this level.

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

Nationwide, 33.6% of elementary school classes that covered required health instruction and required health education courses in middle schools and high schools had at least 1 student with long-term physical, medical, or cognitive disabilities. To accommodate these students with disabilities, 81.9% of the teachers of these classes or courses gave them preferential seating; 79.6% simplified instructional content or made variations in the amount or difficulty of material taught; 77.9% used more skill modeling, practice, or repetition; 70.4% modified assessment criteria; 51.9% had a special education teacher with whom they coordinated assignments for those students; 45.3% had a teacher or aide who came in to assist with those students; and 28.2% assigned note takers or readers for class work.

Staffing and Staff Development. Staffing varies for classes covering required health instruction in elementary schools and required health education courses in middle schools and high schools. Nationwide, teachers of elementary school classes covering required health instruction had a median of 10.4 years of experience teaching health topics, whereas teachers of required health education courses in middle schools and high schools had a median of 7.9 years of experience. About two thirds (67.8%) of teachers of elementary school classes covering required health instruction and 67.1% of teachers of required health education courses in middle schools and high schools were certified, endorsed, or licensed by the state to teach health education at the appropriate grade level. About 1 in 10 (10.5%)

teachers of elementary school classes covering required health instruction and 48.6% of teachers of required health education courses in middle schools and high schools also coached an interscholastic sport.

Almost all (95.2%) teachers of elementary school classes covering required health instruction had an undergraduate degree: 56.0% majored in education, 18.4% in physical education, and 11.4% in health education. Less than 3% majored in biology or another science; home economics or family and consumer science; kinesiology, exercise physiology, or exercise science; nursing; or nutrition. About half (48.8%) also had an undergraduate minor: 40.6% in education and 9.0% in biology or another science. Less than 5% minored in health education; kinesiology, exercise physiology, or exercise science; nutrition; or physical education.

Nationwide, 40.7% of teachers of elementary school classes covering required health instruction had a graduate degree and 71.6% of the graduate degrees were in education. Less than 6% of the graduate degrees were in biology or another science, health education, home economics or family and consumer science, or physical education.

Almost all (99.2%) teachers of required health education courses in middle schools and high schools had an undergraduate degree. Among these teachers, 45.8% majored in physical education, 27.4% in health education, 19.8% in education, and 14.8% in biology or another science. Less than 5% majored in home economics or family and consumer

Table 15. Percentage of All Schools in Which Teachers Taught* STD Prevention Topics as Part of Required Instruction, by School Level, SHPPS 2006

STD Prevention Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
How STDs are diagnosed and treated	3.2	58.9	78.2
How STDs, other than HIV, are transmitted	4.5	65.0	84.5
How to find valid information or services related to STDs or STD screening	3.8	54.2	78.7
How to prevent STDs	5.7	65.6	84.5
Long-term health consequences of STDs	5.1	63.1	82.5
Signs and symptoms of STDs	3.9	62.0	83.5

STD, sexually transmitted disease.

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

Table 16. Percentage of All Schools in Which Teachers Taught* Suicide Prevention Topics as Part of Required Instruction, by School Level, SHPPS 2006

Suicide Prevention Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
How students can influence or support others to prevent suicidal behaviors	19.6	56.1	78.8
How to find valid health information or services to prevent suicidal behaviors	10.2	47.7	74.0
Influence of families on suicidal behaviors	10.2	40.0	68.3
Influence of the media on suicidal behaviors	8.2	37.5	60.5
Relationship between alcohol or other drug use and suicidal behaviors	16.3	59.1	83.3
Resisting peer pressure that would increase risk of suicidal behaviors	17.0	51.4	70.9
Social or cultural influences on suicidal behaviors	10.9	44.9	66.7

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

science; kinesiology, exercise physiology, or exercise science; nursing; nutrition; or public health. About half (56.5%) of these teachers also had an undergraduate minor: 20.1% in education, 17.1% in health education, and 16.0% in biology or another science. Less than 5% minored in home economics or family and consumer science; kinesiology, exercise physiology, or exercise science; nursing; nutrition; physical education; or public health.

Nationwide, 42.5% of teachers of required health education courses in middle schools and high schools had a graduate degree. Among these teachers, 47.0% of their graduate degrees were in education, 19.7% in physical education, and 10.9% in health education. Less than 6% of their graduate degrees were in biology or another science; home economics or family and consumer science; kinesiology, exercise physiology, or exercise science; nutrition;

Table 17. Percentage of All Schools in Which Teachers Taught* Tobacco-Use Prevention Topics as Part of Required Instruction, by School Level, SHPPS 2006

Tobacco-Use Prevention Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Addictive effects of nicotine in tobacco products	63.8	79.5	87.9
Benefits of not smoking cigarettes	75.9	80.9	87.9
Benefits of not smoking cigars	32.6	49.1	67.0
Benefits of not using smokeless tobacco	48.9	74.0	85.3
Health effects of environmental tobacco smoke or secondhand smoke	67.6	77.9	87.1
How many young people use tobacco	36.3	66.8	77.8
How students can influence or support others in efforts to quit using tobacco	58.0	72.5	82.0
How students can influence or support others to prevent tobacco use	65.7	76.6	82.7
How to avoid environmental tobacco smoke or secondhand smoke	60.0	74.2	82.0
How to find valid information or services related to tobacco use prevention or cessation	32.4	64.1	75.9
Importance of quitting tobacco use	66.9	78.3	87.7
Influence of families on tobacco use	59.9	75.3	83.0
Influence of the media on tobacco use	52.3	74.9	85.9
Long-term health consequences of cigarette smoking	73.9	80.3	88.5
Long-term health consequences of cigar smoking	32.6	48.0	64.7
Long-term health consequences of using smokeless tobacco	46.3	74.3	85.8
Making a personal commitment not to use tobacco	71.5	72.0	77.1
Resisting peer pressure to use tobacco	73.4	78.0	88.7
Risks of using other tobacco and tobacco-like products (eg, pipes, kreteks, or bidis)	25.5	53.3	63.2
Short-term health consequences of cigarette smoking	68.8	78.5	87.4
Short-term health consequences of cigar smoking	31.4	49.7	64.9
Short-term health consequences of using smokeless tobacco	46.3	73.1	85.3
Social or cultural influences on tobacco use	52.9	73.4	81.9

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

Table 18. Percentage of All Schools in Which Teachers Taught* Violence Prevention Topics as Part of Required Instruction, by School Level, SHPPS 2006

Violence Prevention Topic	% of All Elementary Schools	% of All Middle Schools	% of All High Schools
Anger management	76.3	65.9	69.8
Bullying	81.4	67.4	68.4
Dating violence	NA	48.7	69.0
Empathy (ie, identification with and understanding of another person's feelings, situation, or motives)	80.2	70.7	68.2
Gun safety	28.8	19.1	29.1
How students can influence or support others to prevent violence	69.2	61.5	68.9
How to find valid information or services to prevent violence	31.3	45.9	59.0
Inappropriate touching	61.0	NA	NA
Influence of families on behaviors related to violence	53.6	52.0	70.2
Influence of the media on behaviors related to violence	56.6	58.9	68.7
Long-term consequences of violence	61.1	56.6	69.0
Personal safety (eg, avoiding becoming a victim of a crime)	NA	53.1	66.7
Personal safety (eg, dealing with strangers)	74.2	NA	NA
Perspective taking (ie, taking another person's point of view)	73.1	64.6	68.8
Prejudice, discrimination, and bias	73.1	62.9	69.7
Prosocial behaviors (eg, cooperation, praise, or showing support for others)	84.0	67.2	68.4
Recognizing signs and symptoms of people who are in danger of hurting others	49.7	49.1	57.6
Recognizing signs and symptoms of people who are in danger of hurting themselves	34.5	47.2	61.9
Relationship between alcohol or other drug use and violence	51.0	64.0	76.7
Resisting peer pressure that would increase risk of violence	70.5	63.7	67.7
Sexual assault and rape	NA	43.4	67.3
Sexual harassment	NA	57.8	66.7
Short-term consequences of violence	69.4	58.9	68.5
Social or cultural influences on behaviors related to violence	49.1	56.8	64.6
Techniques to resolve interpersonal conflicts without fighting	83.3	67.1	73.7
What to do if someone is thinking about hurting himself	35.7	50.1	66.3
What to do if someone is thinking about hurting others	53.9	52.0	63.2

NA, not asked at this level.

*In at least 1 elementary school class or in at least 1 required health education course in middle schools or high schools.

or public health. Only 6.3% of teachers of required health education courses in middle schools or high schools were CHES.

Nationwide, 95.4% of elementary school classes covering required health instruction and required health education courses in middle school or high school had a teacher who received staff development on 1 of the 14 health topics. Specifically, 59.4% of teachers of elementary school classes covering required health instruction and required health education courses in middle school or high school received staff development on violence prevention (Table 4). In contrast, less than half of teachers of elementary school classes covering required health instruction and required health education courses in middle school or high school received staff development on alcohol-use or other drug-use prevention, asthma awareness, emotional and mental health, food-borne illness prevention, HIV prevention, human sexuality, injury prevention and safety, nutrition and dietary behavior, other STD prevention, physical activity and fitness, pregnancy prevention, suicide prevention, and tobacco-use prevention.

More than half of teachers of elementary school classes covering required health instruction and required health education courses in middle schools or high schools received staff development during the 2 years preceding the study on classroom management techniques (eg, social skills training, environmental modification, conflict resolution and mediation, and behavior management); teaching skills for behavior change; teaching students with physical, medical, or cognitive disabilities; and using interactive teaching methods (eg, role plays or cooperative group activities) (Table 4). Less than half of the teachers received staff development during the 2 years preceding the study on assessing or evaluating students in health education, encouraging family or community involvement, teaching students of various cultural backgrounds, and teaching students with limited English proficiency.

Less than half of teachers of elementary school classes covering required health instruction and required health education courses in middle schools or high schools wanted to receive staff development on alcohol-use or other drug-use prevention, asthma awareness,

emotional and mental health, food-borne illness prevention, HIV prevention, human sexuality, injury prevention and safety, nutrition and dietary behavior, other STD prevention, physical activity and fitness, pregnancy prevention, suicide prevention, tobacco-use prevention, and violence prevention (Table 4).

Similarly, less than half of teachers of elementary school classes covering required health instruction and required health education courses in middle schools or high schools wanted to receive staff development on assessing or evaluating students in health education; classroom management techniques; encouraging family or community involvement; teaching skills for behavior change; teaching students of various cultural backgrounds; teaching students with physical, medical, or cognitive disabilities; teaching students with limited English proficiency; and using interactive teaching methods (Table 4).

Changes Between 2000 and 2006 at the Classroom Level. The percentage of elementary schools in which teachers in at least 1 class taught about HIV prevention decreased from 35.9% to 18.5% between 2000 and 2006. Decreases also were detected in the median number of hours spent teaching injury prevention and safety (from 4.4 to 2.1), nutrition and dietary behaviors (from 4.6 to 3.4), and violence prevention (from 4.9 to 2.6) in elementary schools. Further, in middle schools, the median number of hours spent teaching injury prevention and safety decreased from 3.6 to 1.8, but the median number of hours spent teaching STD prevention increased from 1.3 to 1.8.

Since 2000, 2 health topics have received increased focus in required health education courses in high schools. Between 2000 and 2006, the percentage of high schools in which teachers in at least 1 required health education course taught about suicide prevention and violence prevention increased from 66.4% to 79.7% and from 63.1% to 78.1%, respectively. In high schools, the median number of hours spent teaching injury prevention and safety decreased from 4.5 to 2.4, and the median number of hours spent teaching violence prevention decreased from 4.1 to 2.5, but the median number of hours spent teaching pregnancy prevention increased from 2.0 to 3.5.

Some changes in teaching methods occurred, particularly teaching methods involving technology. For example, between 2000 and 2006, increases were detected in the percentage of teachers of elementary school classes covering required health instruction and required health education courses in middle schools or high schools using computer-assisted instruction (from 40.5% to 62.2%), the Internet (from 52.7% to 77.7%), and pledges and contracts for changing behavior or abstaining from a behavior (from 48.1% to 68.0%). (Note that the 2006 estimates presented here do not match those presented earlier in

this article. In SHPPS 2000, teachers were asked only whether they used a particular teaching method. In SHPPS 2006, teachers were asked whether they never, rarely, sometimes, or almost always or always used a particular teaching method. To compare 2000 and 2006 responses, 3 2006 response options [*rarely, sometimes, and almost always or always*] were collapsed to produce a dichotomous variable more similar to the 2000 response options.)

A few changes in receipt of and interest in staff development were detected among teachers of elementary school classes covering required health instruction and of required health education courses in middle schools or high schools. Between 2000 and 2006, increases were detected in the percentage of teachers that received staff development on injury prevention and safety (from 25.0% to 41.3%) and teaching students with physical, medical, or cognitive disabilities (from 42.7% to 56.1%). Between 2000 and 2006, an increase occurred in the percentage of teachers who wanted to receive staff development on alcohol-use or other drug-use prevention (from 17.6% to 29.1%), nutrition and dietary behavior (from 27.8% to 45.5%), physical activity and fitness (from 20.5% to 35.7%), and tobacco-use prevention (14.7% to 24.4%). A fewer percentage of teachers wanted to receive staff development on teaching skills for behavior change (from 47.4% to 34.5%).

DISCUSSION

SHPPS 2006 elicits both hope and concern about the state of school health education nationwide. For example, teachers of required health instruction had a median of 10.4 years of experience teaching health topics in elementary schools and a median of 7.9 years of experience in middle schools and high schools. However, only 13.0% of elementary school teachers and 37.2% of middle school and high school teachers of required health instruction had an undergraduate major, an undergraduate minor, or a graduate degree in health education, and only 6.3% of middle school and high school teachers of required health instruction were CHES. Although nearly all states offered certification, licensure, or endorsement to teach health education, far fewer actually required certification, licensure, or endorsement to teach health education, particularly at the elementary school level. If health education is best taught by teachers with at least some training to teach the subject, then district and school administrators should place more emphasis on hiring new staff with appropriate preservice training and provide high-quality professional development opportunities for all staff responsible for health instruction. Fortunately, since 2000 states and districts have increased

their professional preparation and staff development expectations for teachers of required health instruction, particularly in middle schools and high schools.

Among schools that required students to receive instruction on HIV prevention, human sexuality, other STD prevention, or pregnancy prevention, almost all allowed parents or guardians to exclude their children from receiving instruction on these topics. However, a median of only 1.5 students in elementary school classes, a median of only 1.1 students in middle school courses, and a median of only 1.0 students in high school courses was actually excluded because of parental or guardian request. These data should not be taken to suggest that parental involvement is unnecessary, but rather that parents overwhelmingly approve of these subjects being taught in school.

The median number of total hours of required health instruction on 11 of the 14 health topics increased by grade level from 17.4 in elementary school classes to 25.4 in middle school courses to 40.0 in high school courses. For the typical 18-week semester, this means that students are getting from about 1.0 to 2.2 hours of health instruction per week, or from 12 to 27 minutes per day on these health topics. It is hard to imagine that this much instruction is sufficient to prevent or reduce the wide range of health-risk behaviors schools are asked to address, particularly because the median number of hours spent on some topics has decreased since 2000.

At least 86.3% of states, districts, and schools required the teaching of at least 1 health topic in elementary schools, middle schools, and high schools, and at least 60.8% of states, districts, and schools required the teaching of at least 7 of the 14 health topics in elementary schools, middle schools, and high schools. However, less than 10% of all states, districts, and schools required the teaching of all 14 topics in elementary schools, and less than 40% of all states, districts, and schools required the teaching of all 14 topics in middle schools or high schools. For almost all 14 topics at each grade level, the percentage of states requiring each topic was lower than the percentage of districts and schools requiring the same topic, whereas the percentage of districts and schools requiring most topics was quite similar. The 2 exceptions were HIV prevention and other STD prevention, which more states than districts or schools required for elementary schools. Both patterns reflect local control of the content of instruction. Nonetheless, more state requirements might prove useful in helping districts and schools increase the number of required health topics.

Most states and districts provided funding for staff development or offered staff development on a wide range of health topics and teaching methods. However, during the 2 years preceding the study, the

average percentage of teachers of required health instruction that received staff development on any of the 14 health topics was only 25.5%, and the average percentage that wanted staff development on any of these 14 topics was only 25.7%. Teachers of required health instruction received staff development on violence prevention most often, but the topic the largest percentage wanted staff development on was nutrition and dietary behavior. They received staff development on pregnancy prevention least often, but the topic the smallest percentage wanted staff development on was human sexuality. In contrast, during the 2 years preceding the study, the average percentage of teachers of required health instruction that received staff development on any of 8 teaching methods was 48.3%, and the average percentage that wanted staff development on any of these 8 topics was only 27.9%. The difference between the very high rates at which states and districts provided funding for staff development or offered staff development on both health topics and teaching methods and the comparatively low rates at which teachers providing required health instruction received staff development during the 2 years preceding the study is cause for concern, particularly when one considers the low rates of teachers that wanted staff development in the future. Even allowing for the fact that some teachers were adequately prepared to teach required health instruction, it seems important for future studies to examine who is receiving staff development, how accessible it is, and the quality of the staff development methods and content.

Since 2000, the focus of staff development for teachers of required health instruction has changed to reflect the health topics of general concern nationwide. In general, more staff development was focused on topics related to violence, mental health, and the obesity epidemic. Although this new focus is appropriate, it is a cause of concern that fewer teachers were offered staff development on HIV and STD prevention even as the HIV epidemic continues to grow, at least among some segments of our population.

Although health education has the potential to help students maintain and improve their health, prevent disease, and reduce health-related risk behaviors, this potential is not being fully realized. Positive changes were detected since 2000 at the state and district levels. However, fewer positive changes were detected at the school and classroom levels. Nonetheless, it is possible that the increased state and district efforts to improve health education requirements and professional preparation and staff development activities may have provided the support schools needed to at least maintain if not improve their health education activities even in the midst of new student assessment requirements and

a testing-focused curriculum. SHPPS 2006 data should be used to highlight the critical policy and programmatic gaps that are not being addressed sufficiently and to motivate all health and education policymakers, researchers, and practitioners to rededicate their efforts to improve health education in schools nationwide.

REFERENCES

- Centers for Disease Control and Prevention. Eight component model: health education. Available at: <http://www.cdc.gov/HealthyYouth/CSHP/#1>. Accessed June 23, 2007.
- Centers for Disease Control and Prevention. *Coordinated School Health Program Infrastructure Development: Process Evaluation Manual*. Atlanta, Ga: US Department of Health and Human Services, Centers for Disease Control and Prevention; 1997.
- Joint Terminology Committee. Report of the 2000 Joint Committee on Health Education and Promotion Terminology. *J Sch Health*. 2002;72(1):3-7.
- Botvin GJ, Botvin EM, Ruchlin H. School-based approaches to drug abuse prevention: evidence for effectiveness and suggestions for determining cost-effectiveness. In: Bukoski WJ, ed. *Cost-Benefit/Cost-Effectiveness Research of Drug Abuse Prevention: Implications for Programming and Policy*. NIDA Research Monograph No. 176. Washington, DC: US Department of Health and Human Services; 1998:59-82. Available at: http://www.drugabuse.gov/pdf/monographs/monograph176/059-082_Botvin.pdf. Accessed June 23, 2007.
- Contento I, Balch GI, Bronner YL. Nutrition education for school-aged children. *J Nutr Educ*. 1995; 27(6):298-311.
- Eisen M, Pallitto C, Bradner C, Bolshun N. *Teen Risk-Taking: Promising Prevention Programs and Approaches*. Washington, DC: Urban Institute; 2000. Available at: <http://www.urban.org/url.cfm?ID=310293>. Accessed June 23, 2007.
- Gottfredson DC. School-based crime prevention. In: Sherman LW, Gottfredson D, MacKenzie D, Eck J, Reuter P, Bushway S, eds. *Preventing Crime: What Works, What Doesn't, What's Promising*. Washington, DC: National Institute of Justice; 1998. Available at: <http://www.ncjrs.org/pdffiles/171676.pdf>.
- Kirby D. *Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy*. Washington, DC: National Campaign to Prevent Teen Pregnancy; 2001.
- Lohrmann DK, Wooley SF. Comprehensive school health education. In: Marx E, Wooley S, eds. *Health Is Academic: A Guide to Coordinated School Health Programs*. New York, NY: Teachers College Press; 1998:43-45.
- Lytle L, Achterberg C. Changing the diet of America's children: what works and why? *J Nutr Educ*. 1995;27(5):250-260.
- Nation M, Crusto C, Wandersman A, et al. What works in prevention: principles of effective prevention programs. *Am Psychol*. 2003;58(6-7):449-456.
- Stone EJ, McKenzie TL, Welk GJ, Booth ML. Effects of physical activity interventions in youth. Review and synthesis. *Am J Prev Med*. 1998;15(4):298-315.
- Sussman S. Risk factors for and prevention of tobacco use. Review. *Pediatr Blood Cancer*. 2005;44(7):614-619.
- Weed SE, Ericksen I. *A Model for Influencing Adolescent Sexual Behavior*. Salt Lake City, Utah: Institute for Research and Evaluation; 2005.
- Joint Committee on National Health Education Standards. *National Health Education Standards: Achieving Health Literacy*. Atlanta, Ga: American Cancer Society; 1995.
- Joint Committee on National Health Education Standards. *National Health Education Standards, Second Edition, Achieving Excellence*. Atlanta, Ga: American Cancer Society; 2007.
- Dent CW, Sussman S, Stacy AW, Craig S, Burton D, Flay BR. Two-year behavior outcomes of project towards no tobacco use. *J Consult Clin Psychol*. 1995;63(4):676-677.
- Hawkins JD, Catalano RJ, Kosterman R, Abbott R, Hill KG. Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Arch Pediatr Adolesc Med*. 1999; 153(3):226-234.
- Coleman KJ, Tiller CL, Sanchez J, et al. Prevention of the epidemic increase in child risk of overweight in low-income schools. *Arch Pediatr Adolesc Med*. 2005;159:217-224.
- Centers for Disease Control and Prevention. CDC's school health education resources. Available at: <http://www.cdc.gov/healthyyouth/SHER>. Accessed June 23, 2007.
- US Department of Education. Office of safe and drug free schools. Available at: <http://www.ed.gov/about/offices/list/osdfs/index.html>. Accessed June 23, 2007.
- Substance Abuse and Mental Health Services Administration. The safe schools/health students initiative. Available at: <http://www.sshs.samhsa.gov/>. Accessed June 23, 2007.
- Office of Population Affairs. AFL abstinence education demonstration projects FY 2007. Available at: <http://opa.osophs.dhhs.gov/titlexx/afl-grantees-ae.html>. Accessed June 23, 2007.
- Administration for Children and Families. Fact sheet: section 510 state abstinence education program. Available at: <http://www.acf.hhs.gov/programs/fysb/content/abstinence/factsheet.htm>. Accessed June 23, 2007.
- Administration for Children and Families. Fact sheet: community-based abstinence education program. Available at: <http://www.acf.hhs.gov/programs/fysb/content/abstinence/community.htm>. Accessed June 23, 2007.
- US Department of Health and Human Services. *Healthy People 2010: Understanding and Improving Health*. 2nd ed. Washington, DC: US Government Printing Office; 2000.
- Collins JL, Small ML, Kann L, Pateman BC, Gold RL, Kolbe LJ. The School Health Policies and Programs Study: school health education. *J Sch Health*. 1995;8(65):302-310.
- Kann L, Brener ND, Allensworth D. Health education: school Health Policies and Programs Study 2000. *J Sch Health*. 2001;71(7):266-278.
- National Association of State Boards of Education. State-level school health policies. Available at: http://www.nasbe.org/HealthySchools/States/State_Policy.asp. Accessed June 23, 2007.
- Guttman Institute. State center: state level adolescents resources. Available at: <http://www.guttman.org/statecenter/adolescents.html>. Accessed June 23, 2007.